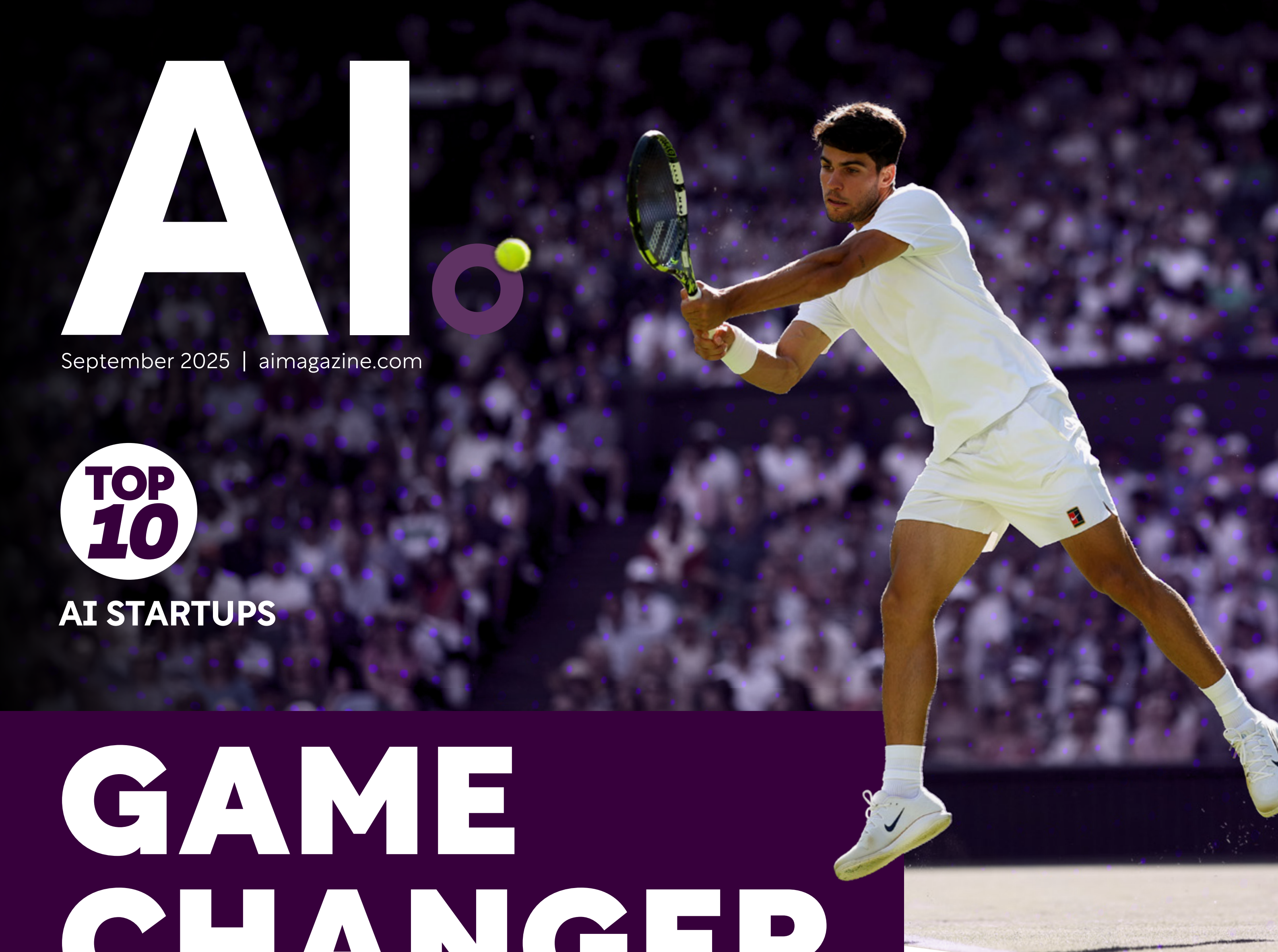
AI

September 2025 | aimagazine.com



TOP 10
AI STARTUPS

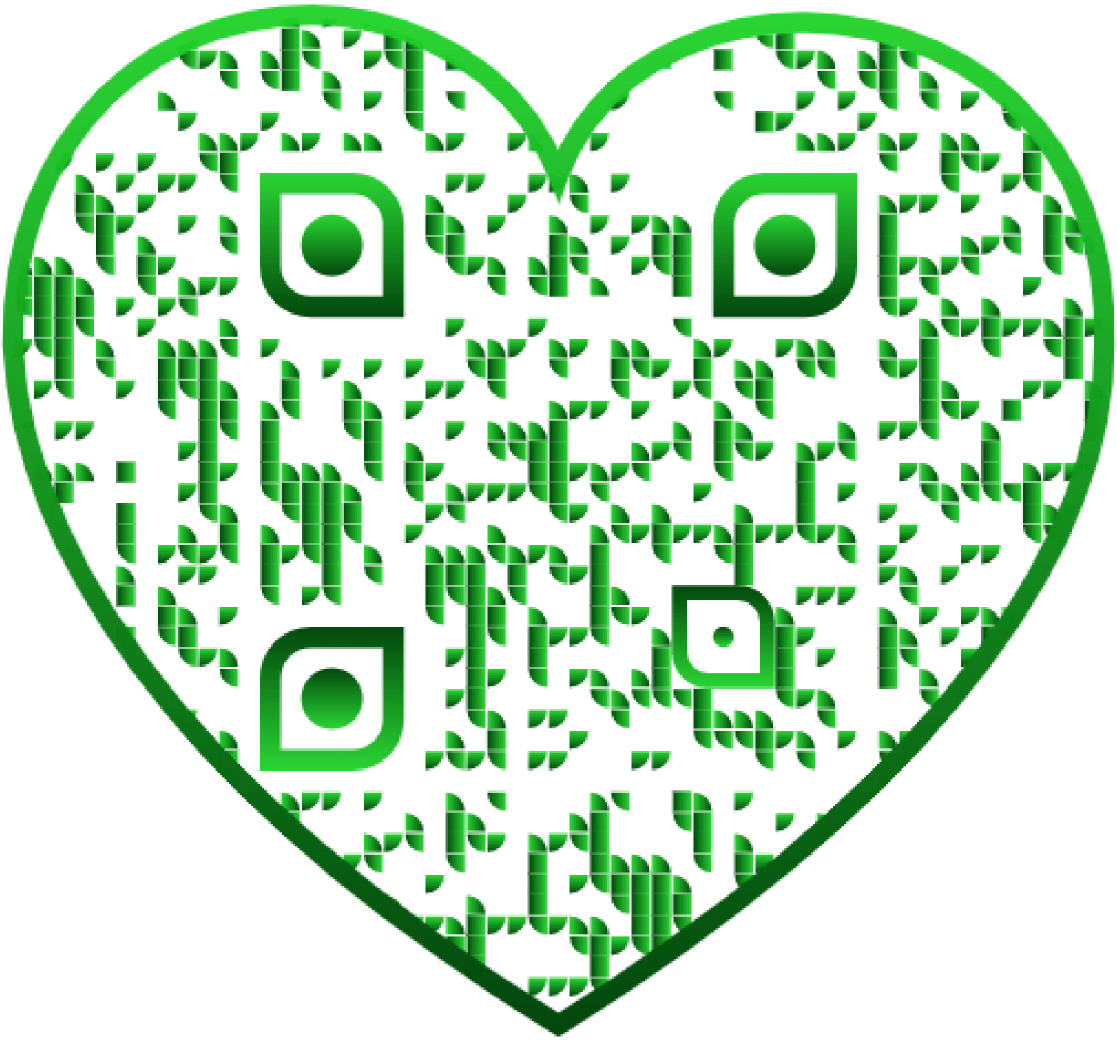
GAME CHANGER

Microsoft and IBM: using AI power to transform elite sport

AI ETHICS & REGULATION
Governance dividing global leaders

THE INTERVIEW
LiquidStack CEO Joe Capes

SCHNEIDER ELECTRIC | **NVIDIA** | **THE HACKETT GROUP**



GE VERNOVA

WHITEPAPER

EMPOWER INTELLIGENT GRIDS WITH AI

Using GridOS® to Orchestrate a More Sustainable Energy Grid

- **AI TECHNOLOGIES FOR THE INTELLIGENT GRID OF THE FUTURE**
- **AI FOR UTILITIES**
- **GRIDOS® ORCHESTRATION SOFTWARE: BUILT FOR AI DEPLOYMENT**
- **KEY STEPS FOR AI ADOPTION**
- **KEY CONSIDERATIONS FOR AI ADOPTION**

GridOS®

IVE SUMMARY

rming energy landscape, utilities face unprecedented challenges driven by the integration
rgy sources, increasing grid complexity, and the need for enhanced resilience against
eme weather events.

management approaches, rooted in centralized decision-making and static methodologies
adequate in addressing these dynamic challenges. This whitepaper delves into the potential
Intelligence (AI) can play in revolutionizing grid management.

e capability to process vast amounts of data in real-time, enabling decentralized decision
ve management of grid assets. By leveraging these advanced capabilities, utilities can optimize
ation, improve operational efficiency, unlock new economic opportunities, and bolster grid

tepaper, part of a series of four, outlines the rationale, essential steps, and considerations for
ing AI to orchestrate the grid, guiding utilities in their journey towards a more sustainable, resilient
aptive energy future. Future whitepapers in the series will dive deeper into how AI can benefit grid
tions, planning, and market-related use cases.

The introduction of GridOS® orchestration software demonstrates the integration of AI within a modular and scalable architecture, enabling the seamless adoption of AI models and applications.

CHAPTER 1:

AI TECHNOLOGIES FOR THE INTELLIGENT GRID OF THE FUTURE

Trends and grid realities driving the need for AI

Today's grid is dramatically different than the grid of the past and continues to change at an exponential pace. Grid software must keep pace, harnessing new intelligence to meet change head-on. Today, software must help utilities tackle challenges at scale, including rapidly increasing grid assets, greater renewables integration, frequent disruptive weather events, growing cyberattacks, the addition of IoT and behind-the-meter sensing, and the need to make faster and more distributed grid decisions close to the edge.

Severe weather events

+75%
increase in last 20 years
(2000 - 2019 compared to 1980 - 1999)

Electrification of everything

3x
electricity demand by 2050

2.7x
expected growth in global renewable capacity by 2030

Cybersecurity

42%
increase in energy and utilities industry cyber attacks in last year

Growing volume and variety of grid assets

The total number of assets comprising the modern distribution grid grows exponentially every year as millions of DERs and low-cost smart sensors are added to distribution networks. Additionally, many of these devices such as DERs, EVs, and heat pumps are behind the meter – at the grid edge.

The volume of data generation also increases dramatically in transmission as more and more advanced measurement systems such as phasor measurement units (PMUs) appear on the grid.

This expanding volume of grid assets and devices can provide greater visibility and information about the static and dynamic state of the grid, but equally drives a need for intelligent analysis, decision support, and automation.

The sheer size of the grid and the velocity at which operational decisions must be made are driving trends toward distributed optimization and the execution of applications at the grid edge to achieve speed and latency requirements. The traditional approach to decision-making, involving 1) sending grid data to a centralized location to be processed and 2) determining and transmitting the required control actions from a centralized location, is grossly inadequate for the scale and speed needed. Such centralization runs counter to the highly distributed nature of the grid today. If edge devices are to be orchestrated intelligently, automation capabilities and semi-autonomous operation must be available at the grid edge. Grid orchestration enables policies to be set and deployed at the center, allowing distributed, robust, autonomous execution of the policies throughout the grid.

Empower intelligent grids with AI

3

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SUST
Get in touc

Electrificat
Grid Software business and GridOS® portfolio is trusted by global utilities to orchestrate a more sustainable energy grid and help deliver reliable and affordable electricity to their customers.

Read Whitepaper

TECH & AI LIVE
NEW YORK

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AS AI GETS SMARTER AND MORE HUMAN, SO DO WE

This month's stories showcase how AI is moving into the heart of human experiences. As Microsoft re-imagines how 1.8 billion football fans engage with the beautiful game, Wimbledon and IBM are creating courtside innovation that promises to change tennis forever.

Yet for AI to keep accelerating human existence – from boardrooms to everyday lives – governance, infrastructure and strategy are becoming more important.

From LiquidStack explaining why AI's development will depend on a liquid revolution, to G42 and Nvidia's ambitious Earth-2 partnership tackling climate challenges, these stories reveal AI's expanding ambitions alongside our own.

What strikes me most is how AI is simultaneously becoming more human-centred and more technically sophisticated.

The technology is maturing – and so are we.

Kitty Wheeler

KITTY WHEELER

CONTACT ME

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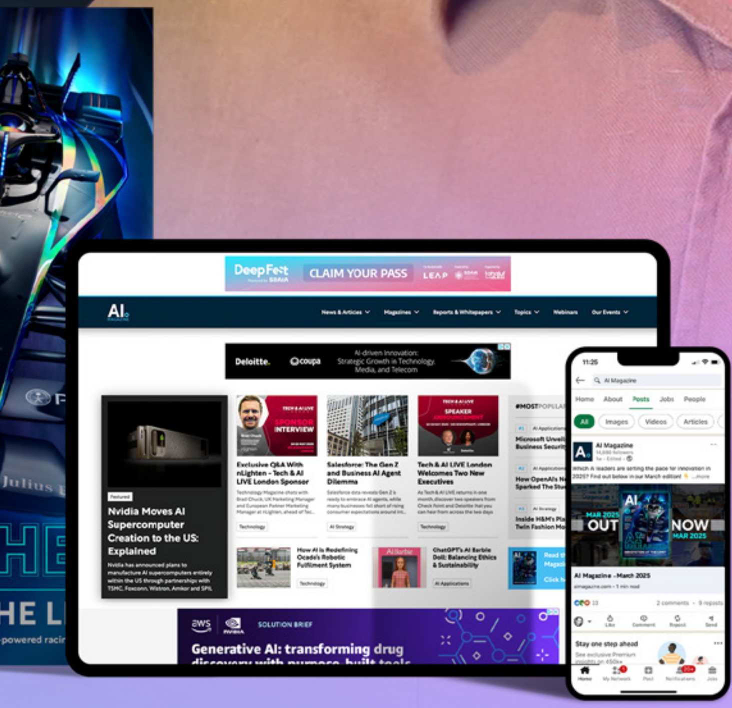
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AI Magazine - March 2025

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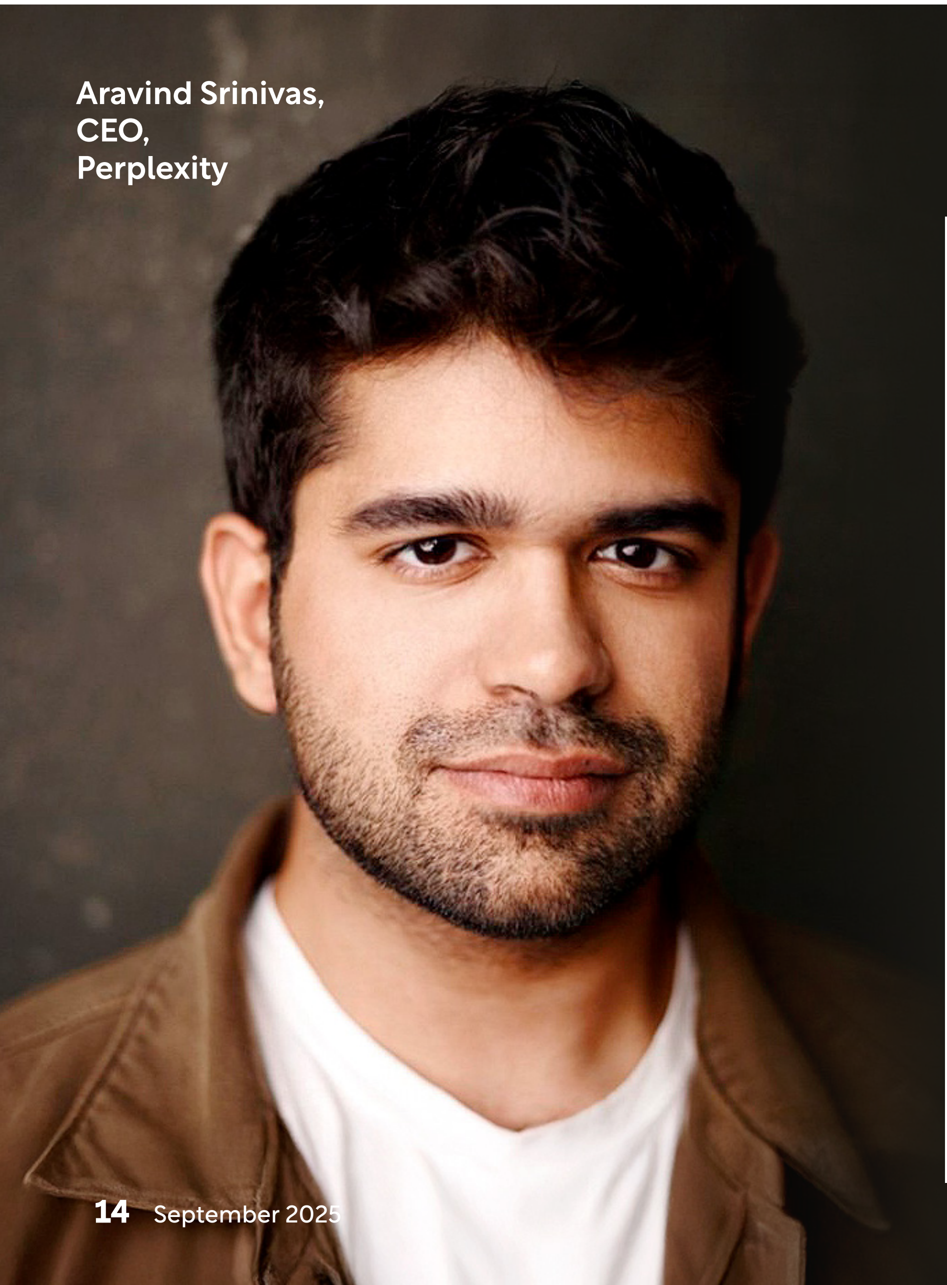
THE MONTH IN AI

This month, Perplexity offers to buy Google's Chrome browser, with other stories from Dayforce, Lenovo and GitHub

WRITTEN BY: MARCUS LAW



Aravind Srinivas,
CEO,
Perplexity

WHY PERPLEXITY HAS OFFERED TO BUY GOOGLE CHROME FOR $34.5BN

Google insists Chrome is not for sale, but Perplexity has offered US$34.5bn for it anyway.

The three-year-old AI startup's bid to acquire the most popular web browser worldwide comes as Google faces mounting pressure from US antitrust regulators. With Judge Amit Mehta ruling in April 2025 that Google illegally maintains a search monopoly, Perplexity could be positioning itself for a sale that Google may not be able to refuse.

LENOVO: HOW ENTERPRISES CAN BEAT THE AI READINESS GAP

Lenovo's latest report finds that while AI investment soars, 89% of IT leaders agree that major digital transformation is essential before AI can deliver.

> "After all this time, my start-up roots have begun tugging on me and I've decided to leave GitHub to become a founder again"

Thomas Dohmke,
CEO,
GitHub

HOW VW GROUP AND AWS ARE SCALING AI ACROSS 43 GLOBAL FACTORIES

German manufacturer Volkswagen Group is scaling AI operations through five-year AWS cloud partnership spanning 43 factories.

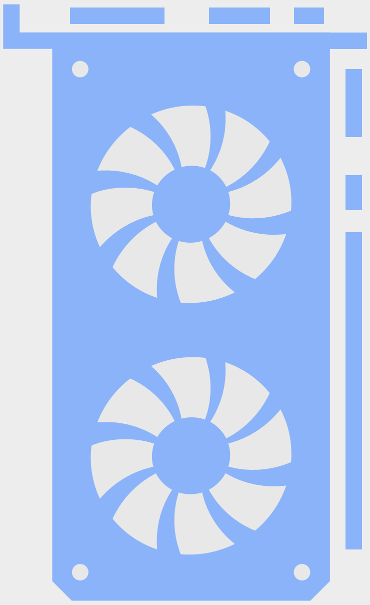
THOMA BRAVO IS AGREEING TO ACQUIRE DAYFORCE IN AN ALL-CASH TRANSACTION VALUED AT

US$12.3bn

AI IN NUMBERS

50x

Nvidia says its Blackwell GPUs provide up to 50x greater energy efficiency on AI workloads



40%

IBM reduces operational CO_2 emissions by 40% through AI-driven analytics and facility optimisation

84%

Google data centers operate with 66% carbon-free energy hourly and achieve 84% less overhead power use compared to industry average, driving high energy efficiency

Hugging Face standardises AI CO_2 emission tracking, analysing over

3,000

models – showing minor carbon footprint reductions and encouraging reporting transparency

40%

Google DeepMind cuts data centre cooling energy by up to 40%, leading to about 15% improvement in overall Power Usage Effectiveness (PUE) – using machine learning for autonomous cooling optimisation

100%

Microsoft Azure runs on 100% renewable energy, implementing energy-efficient liquid cooling and battery systems to decrease carbon footprint

PEOPLE MO

AI Magazine spotlights some of the latest executive appointments in industries across the world from holding companies, to cloud computing, to governments

WRITTEN BY: KITTY WHEELER

ERIC HYSEN

JOB FROM: **CHIEF INFORMATION OFFICER (CIO) AND CHIEF AI OFFICER (CAIO) AT DHS**

JOB TO: **CHIEF AI & TRANSFORMATION OFFICER AT SALESFORCE**

Salesforce hires Eric Hysen, former DHS CIO and first CAIO, to lead AI change across legal and corporate affairs.

The Harvard computer science graduate has rare expertise in balancing Silicon Valley innovation with Washington regulation – which is invaluable as AI scrutiny intensifies across enterprise software.

> **“My focus will be on putting AI capabilities to work across every aspect of our teams”**

OVES

Eric Hysen,
Chief AI &
Transformation
Officer,
Salesforce

Jade Leung,
The UK Prime
Minister's AI Adviser

Blake Moore,
Chair,
National AI
Task Force

PEOPLE MO

JADE LEUNG

JOB FROM: **GOVERNANCE LEAD AT OPENAI**

JOB TO: **THE UK PRIME MINISTER'S AI ADVISER**

The UK appoints Jade Leung, Chief Technology Officer (CTO) of the AI Security Institute, as Prime Minister's AI adviser.

She'll report directly to Keir Starmer while splitting time between Downing Street and the Institute, tasked with positioning Britain as the global leader in AI governance.

BLAKE MOORE

JOB FROM: **US REPRESENTATIVE FOR UTAH'S 1ST CONGRESSIONAL DISTRICT**

JOB TO: **CHAIR OF THE NATIONAL AI TASK FORCE**

US Representative Blake Moore is appointed Chair of the National AI Task Force to lead bipartisan efforts in shaping federal AI policy across education, defense and workforce development.

His leadership focuses on balancing innovation with ethical safeguards as AI technology evolves.

Dr. Chan
Chief AI &
VCI
ASEAN

Dr. Chan Wai Mun, Chief AI and Data Officer, VCI Global

OVES

DR. CHAN WAI MUN

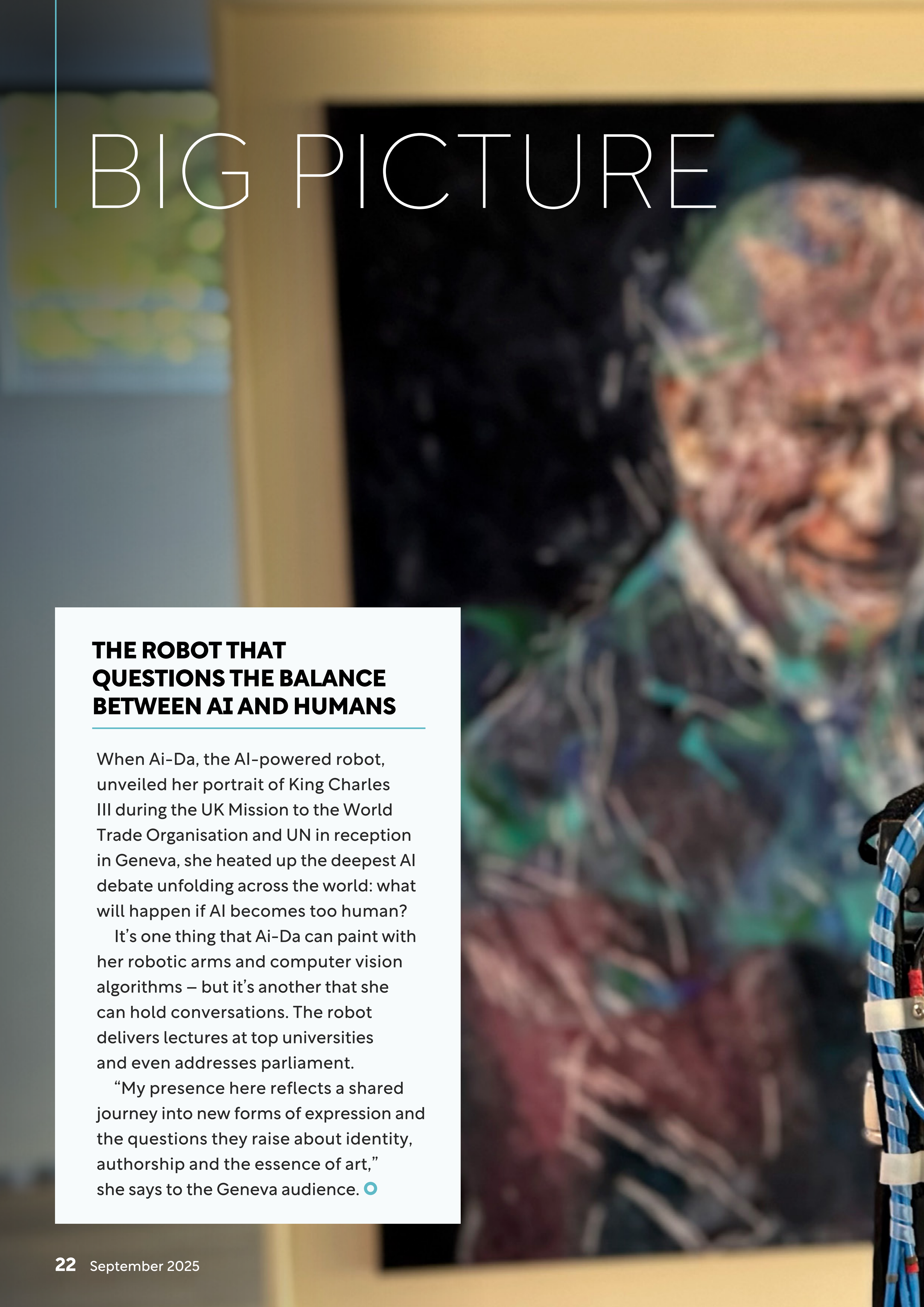
JOB FROM: **DATA SCIENCE AND AI ROLES AT INTEL**

JOB TO: **CHIEF AI AND DATA OFFICER AT VCI GLOBAL**

VCI Global hires Dr. Chan Wai Mun as Chief AI and Data Officer, bringing seven years of experience from Intel and GfK plus a PhD in Engineering.

The appointment supports the Southeast Asian company's transformation from capital markets consultancy to a diversified tech player targeting AI infrastructure and cybersecurity solutions.

BIG PICTURE



THE ROBOT THAT QUESTIONS THE BALANCE BETWEEN AI AND HUMANS

When Ai-Da, the AI-powered robot, unveiled her portrait of King Charles III during the UK Mission to the World Trade Organisation and UN in reception in Geneva, she heated up the deepest AI debate unfolding across the world: what will happen if AI becomes too human?

It's one thing that Ai-Da can paint with her robotic arms and computer vision algorithms – but it's another that she can hold conversations. The robot delivers lectures at top universities and even addresses parliament.

"My presence here reflects a shared journey into new forms of expression and the questions they raise about identity, authorship and the essence of art," she says to the Geneva audience.

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THE AI INTERVIEW

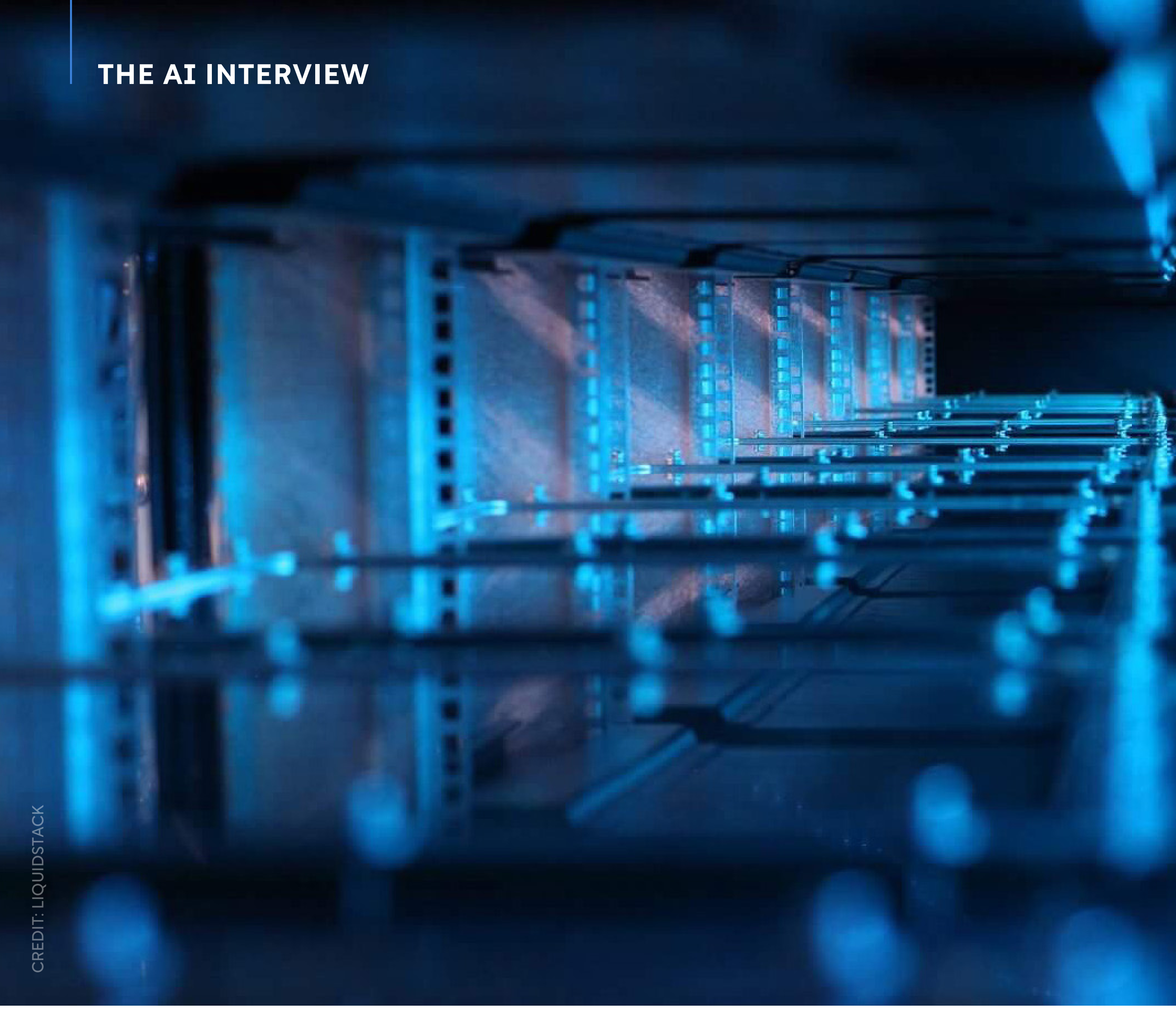
THE COOLING CRISIS

WHY AI DEPENDS ON A LIQUID REVOLUTION

Liquid Stack's CEO Joe Capes explains why liquid cooling is essential for the next generation of AI in a world where every degree and every watt counts

WRITTEN BY: KITTY WHEELER

Joe Capes,
CEO,
Liquid Stack



CREDIT: LIQUIDSTACK

Behind every ChatGPT query, every AI-generated image and every machine learning (ML) model lies a fundamental physical reality: heat.

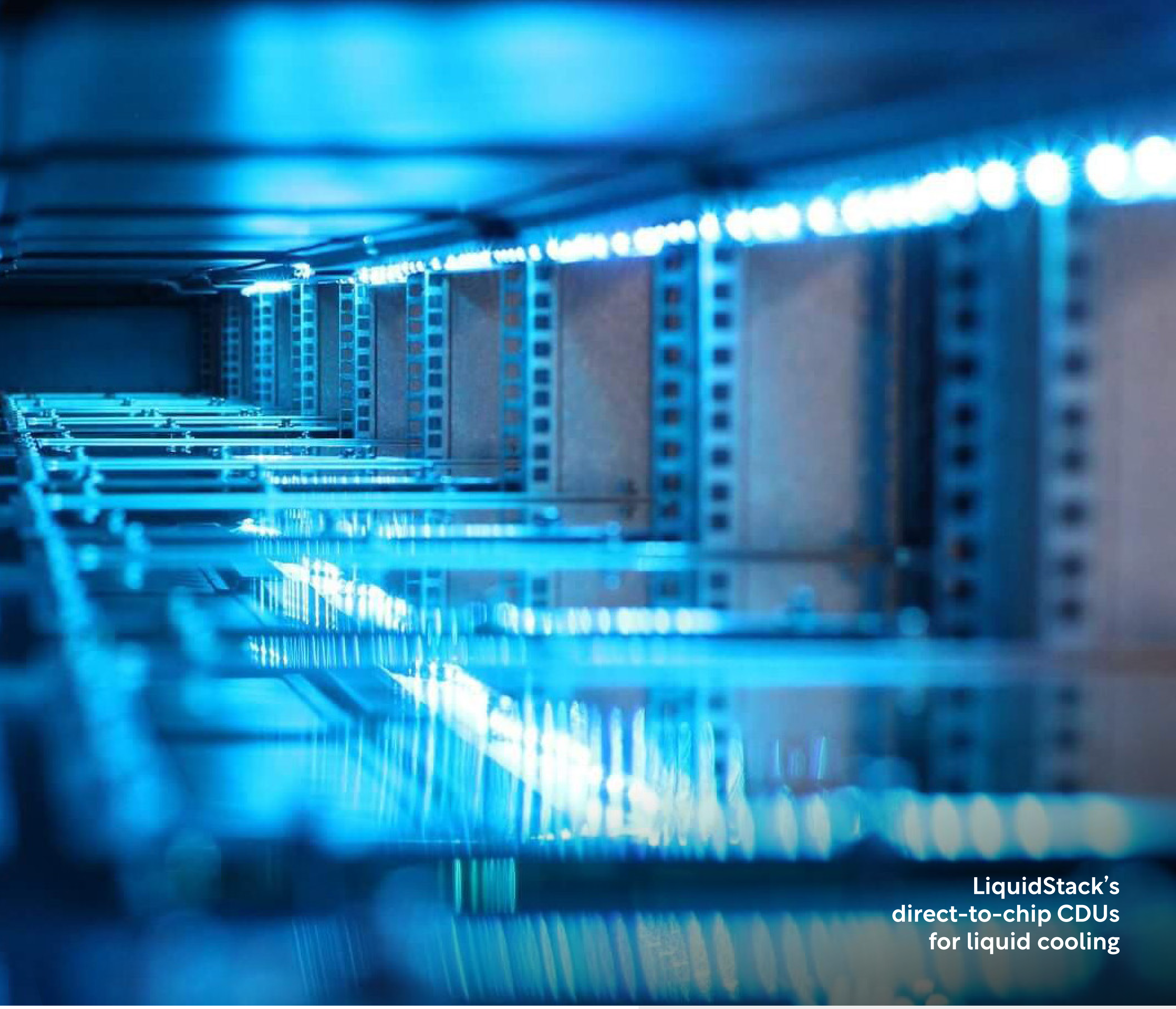
Since AI is quickly becoming the beating heart of global business operations, the infrastructure supporting it is facing a thermal crisis that threatens to hold AI's development back.

The numbers are staggering. OpenAI's GPT-4 training reportedly consumed enough electricity to power a small city for weeks. Microsoft's AI operations have pushed the company's carbon emissions up by nearly 30% since 2020. Meanwhile, individual AI chips now consume 2,000 watts – more than a household microwave running continuously – with 5,000-watt processors already in development.

Traditional air cooling, the mainstay of data centres for decades, simply cannot cope.

This infrastructure reckoning has catapulted liquid cooling from a niche technology to a necessity.

At the centre of this change sits Liquid Stack, a company that CEO Joe Capes describes as having found itself "in the



LiquidStack's direct-to-chip CDUs for liquid cooling

right place at the right time with the right offering," being the world's only full-service liquid cooling provider.

From Bitcoin mines to AI goldmines

Liquid Stack's journey began in the volatile world of cryptocurrency mining: a background that now provides unexpected advantages in the AI infrastructure game.

"We started out as a Bitcoin mining company and deployed a 40-megawatt data centre in Eastern Europe in 2015, then a 120-megawatt site in Azerbaijan in 2018," the CEO recalls.

JOE CAPES

TITLE: **CEO**

COMPANY: **LIQUIDSTACK**

INDUSTRY: **DATA CENTRE**

Joe Capes is CEO of LiquidStack, the world's only full-service liquid cooling provider. He previously led the company's pivot from Bitcoin mining to AI infrastructure, pioneering two-phase immersion cooling technology.

"When I joined the company, we pivoted out of crypto – it was just too volatile and I didn't want the company to be pegged to the price of Bitcoin."

The reason the cryptocurrency heritage has proved invaluable, is because it's helped in understanding high-performance computing demands.

"We have a really close relationship with the chip manufacturers and semiconductor manufacturers dating back to the start of the company," Joe explains.

We understand the hardware and chipsets. Not every company that we compete with understands what happens inside the server.

"Five to 10 years ago, a large liquid cooling project might be five megawatts or maybe 10 megawatts," he says.

"The last project that we won was 150 megawatts."

The science behind the solution

Liquid Stack's approach centres on what the CEO describes as "two-phase liquid immersion cooling": a technology that harnesses phase change to achieve dramatic efficiency improvements.

His explanation employs an unexpected analogy: "I have a border terrier who gets really hot in the summer because he's got a double wiry coat.

"Dogs don't have pores like we do, so they have to reject their heat through their tongue, using the evaporation of saliva going from liquid to gas. That's about 4,000 times more efficient than air cooling."

In other words, efficiency advantage becomes crucial as environmental concerns mount.

> **"When we roll out of bed every day, all we do is liquid cooling. A lot of our competitors have hundreds or even thousands of products, and cooling is just one of the things they do"**
>
> **Joe Capes,**
> CEO,
> **Liquid Stack**

In the US alone, data centres will consume approximately 600 billion litres of water this year to reject heat.

"It's a massive issue," Joe observes, "I was just in London a couple of weeks ago and the weather was wonderful, but it was really dry – like a drought.

"Weather patterns are changing, it's getting hotter – and the severity of weather changes are greater."

This means that the environmental imperative has converged with economic necessity.

At Nvidia's GTC conference in March, the company announced 600-kilowatt racks – a staggering leap from the six to 10 kilowatts once considered standard.

"It's a massive order of magnitude increase in power density," Joe says.

liquidstack
liquidstack

CREDIT: LIQUIDSTACK

LiquidStack’s direct -to-chip CDUs

GigaModular: LiquidStack's engineering for the unknown

Recognising these challenges, Liquid Stack developed what could be the industry's first truly scalable liquid cooling platform.

The GigaModular CDU (Coolant Distribution Unit) is a rethinking of data centre cooling architecture.

"Rather than just iterate by coming out with another product, we wanted to solve and future-proof deployments through a platform that customers can grow with," the CEO explains.

The system's modular design addresses a critical challenge facing AI operators: the need for flexible infrastructure that can adapt to quickly evolving requirements whilst delivering immediate returns on investment.

The GigaModular's innovation lies in its shared control architecture.

"Every single system traditionally has an electronics box, a PLC and all of these components," Joe notes.

"What GigaModular does is leverage one control system across multiple pumping units."

This approach delivers both economic and environmental benefits, massively reducing the direct and indirect carbon footprint compared to traditional cooling systems that duplicate control infrastructure across multiple units.

The platform's development timeline also reflects the industry's accelerated innovation cycles.

When Nvidia approached Liquid Stack to develop the system, the company delivered in just one year: half the typical product development timeframe.

CREDIT: LIQUIDSTACK

"Normal product development cycles are like two to three years," Joe says.

The supply chain reckoning

The fast adoption of liquid cooling has exposed significant infrastructure constraints across the global supply chain.

"The demand for units is outstripping global capacity to produce the infrastructure," the CEO says.

Recent tariff implementations have further complicated matters, forcing manufacturers to reevaluate supply chains whilst demand continues to surge.

LiquidStack's GigaModular CDU delivering direct-to-chip liquid cooling with up to 10MW capacity

The situation is exacerbated by timing mismatches between AI development cycles and traditional data centre construction.

"Typical design build cycle is at least 18 months," he points out.

"Based on the initial tailwinds around Blackwell, the new AI purpose-built data centres are only really coming online in Q3."

This disconnect has forced many operators to retrofit existing air-cooled facilities – a process Joe describes as "very disruptive" since these facilities weren't designed for the necessary piping infrastructure.

The challenge is compounded further by operational temperature differences: whilst liquid cooling systems optimise for 40-degree Celsius water, existing facilities typically operate at 20 degrees, leading to higher power usage effectiveness ratios.

The competitive advantage of specialisation

In an industry where most major players offer cooling as one component of broader portfolios, Liquid Stack's singular focus provides distinct advantages."This is all we do," Joe says.

"When we roll out of bed every day, all we do is liquid cooling. A lot of our competitors have hundreds or even thousands of products – and cooling is just one of the things they do."

Encompassing everything from two-phase immersion systems to direct-to-chip solutions, the company's unusual trajectory – pioneering two-phase cooling before expanding into simpler technologies – defies conventional market entry strategies.

"We started out doing two-phase, which is really hard to perfect and manufacture. The market is coming towards us as chip TDPs continue to increase and rack density continues to increase," he says.

AI like liquid cooling: The unstoppable force

The liquid cooling revolution appears inexorable, driven by the physical limitations of traditional cooling methods and the relentless advance of AI workloads.

"It's like nobody said we needed iPhones. If you look at AI, you probably see it in your email where all of a sudden a feature just arrives and you're like, 'whoa, where did that come from?' It's proliferating across all businesses.

"There's so much interest in either transacting the business or going public," he notes.

"At some point we will either go public or become part of a larger organisation that has additional resources to help us grow and scale faster than we can as a standalone.

"Most of our customers realise that it's indomitable – nothing's going to stop it," he concludes. ○

liquidstack
liquidstack
liquidstack

CREDIT: LIQUIDSTACK

GigaModular CDU

CREDIT: JUSTIN SULLIVAN VIA GETTY IMAGES

Sam Altman,
CEO,
OpenAI

TOP 10 AI STARTUPS

AI startups have become some of the most influential leaders, covering breakthroughs across AGI, ML, Gen AI and more while addressing critical challenges

WRITTEN BY: KITTY WHEELER

AI startups have witnessed one of the steepest technical learning curves in history by innovating in such a volatile and new market.

Unlike the dot-com era's broad-based internet plays, today's AI leaders have carved out highly technical niches that require specialised expertise and substantial computational infrastructure investments.

The current funding environment shows this technical complexity. Investors are backing companies with demonstrable model performance metrics rather than user growth alone.

While Scale AI's US$14bn valuation from Meta demonstrates how data infrastructure has become as valuable as the algorithms themselves, Anthropic's Constitutional AI framework commands premium pricing from enterprises prioritising regulatory compliance over raw capability.

This month, AI Magazine spotlights the startups that have become influencers in the industry and how they have done it.

10

COHERE

TOTAL FUNDING: **US$935M**
EMPLOYEES: **500**
CEO: **AIDAN GOMEZ**
FOUNDED: **2019**

What makes Cohere stand out is its transformer-based models, which enable enterprises to reduce the high costs typically associated with machine learning (ML) development by providing scalable, efficient and easy-to-integrate AI solutions.

The startup targets regulated industries including finance, healthcare, manufacturing and energy sectors.

It does this by focusing on compliance-ready solutions that address industry-specific regulatory requirements, allowing it to capture market share among risk-averse enterprises requiring auditable AI systems rather than general-purpose capabilities.

Sam Altman,
CEO,
OpenAI

WATCH NOW
Who controls
AI's future

DEEPL

TOTAL FUNDING: **US$415M**
EMPLOYEES: **1,600**
CEO: **JAROSLAW 'JAREK' KUTYLOWSKI**
FOUNDED: **2017**

09

DeepL is a German translation specialist that has carved out dominance in neural machine translation by consistently outperforming Google Translate in tone and context preservation.

Now, the company's precision in maintaining contextual nuance has made it indispensable for legal, financial and technical translation where errors carry significant costs.

Its approach is unique because it demonstrates how specialised AI achieving near-human accuracy within specific domains can establish market leadership against technology giants through superior quality metrics.

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DeepL – Unboxing the future of Language AI

Jaroslaw Kutylowski, CEO, DeepL

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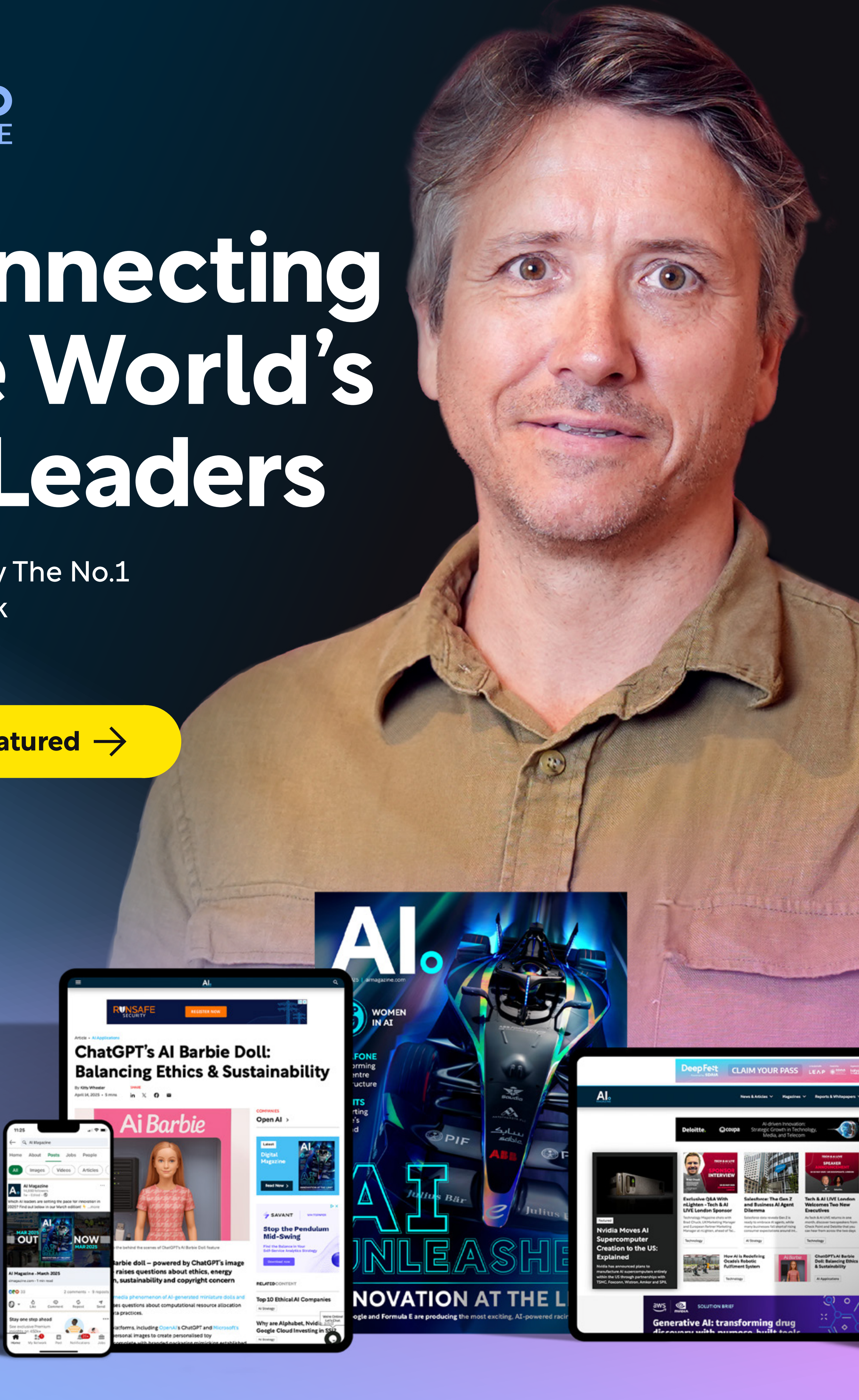
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08

ELEVENLABS

TOTAL FUNDING: **US$281M**
EMPLOYEES: **100**
CEO: **MATI STANISZEWSKI**
FOUNDED: **2022**

What makes the startup stand out is its browser-based text-to-speech software and voice cloning tools that generate new vocal styles from minimal audio samples.

Its full-stack approach around audio AI – incorporating specialised data pipelines, voice coaching teams and developer tools – has enabled consistent outperformance against larger competitors through focused excellence.

Now, the startup's capabilities extend across 28 languages through products including "Projects" for long-form content and an AI Speech Classifier – and over one million users access the platform.

IIElevenLabs

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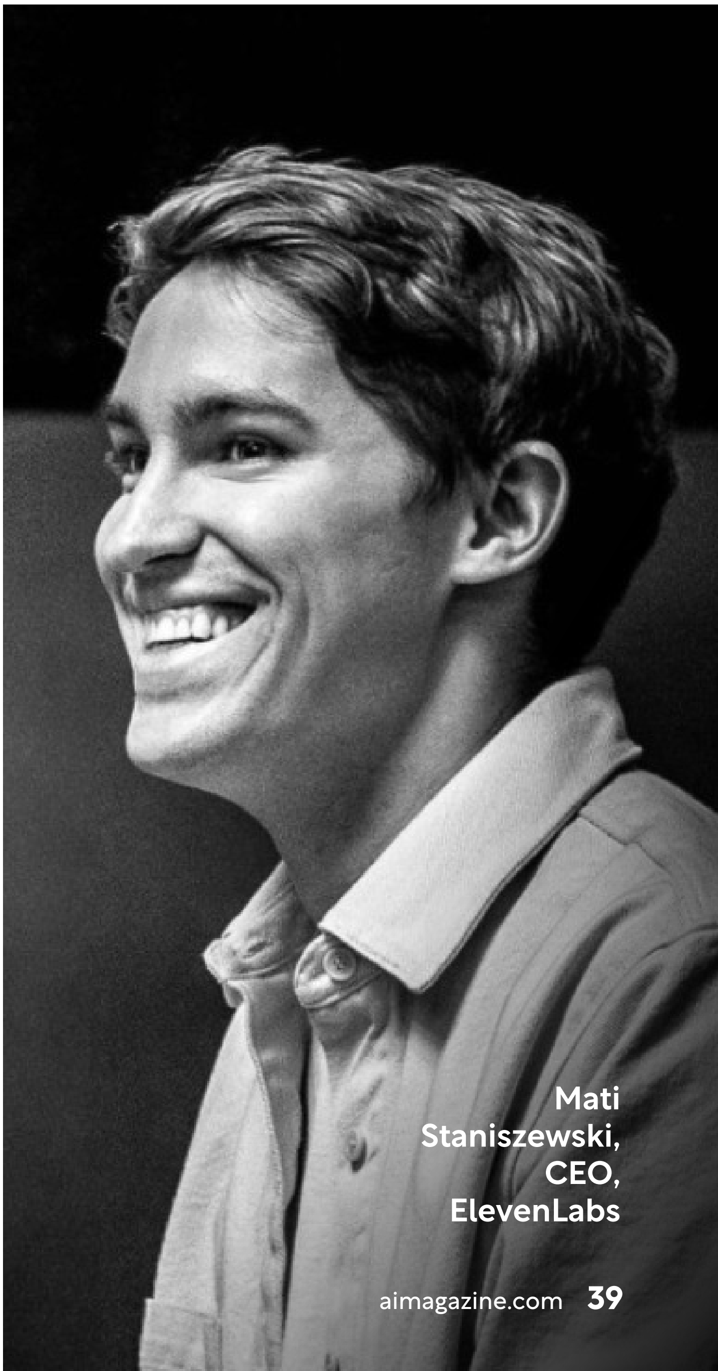
How We Make AI Characters: ElevenLabs, Midjourney, Hedra



Mati Staniszewski, CEO, ElevenLabs

07

MISTRAL AI

TOTAL FUNDING: **US$1.1BN**
EMPLOYEES: **200**
CEO: **ARTHUR MENSCH**
FOUNDED: **2023**

Named after the Mediterranean wind, Mistral AI democratises frontier AI through open-source models adopted across finance, automotive and telecommunications sectors.

European institutions and global enterprises utilise its products including “Le Chat,” a conversational AI comparable to ChatGPT, plus API-accessible models through partner platforms.

The company’s open-source strategy is particularly noteworthy because it challenges proprietary model dominance whilst fostering community development and accelerating adoption by reducing access barriers.

This approach shows Europe’s growing role as an AI innovation hub distinct from US-centric development.

Arthur Mensch,
CEO,
Mistral AI

WATCH NOW
Mistral AI CEO: Nvidia partnership ‘super meaningful’

06

THINKING MACHINES LAB

TOTAL FUNDING: **US$2BN**
EMPLOYEES: **30**
CEO: **MIRA MURATI**
FOUNDED: **2025**

Former OpenAI Chief Technology Officer Mira Murati founded Thinking Machines Lab in February 2025, achieving a record-breaking US$2bn seed round at a US$12bn valuation by July. Andreessen Horowitz, Nvidia and AMD led the funding round.

The company specialises in developing autonomous agentic AI systems for enterprise decision-making, emphasising human-AI collaboration and multimodal capabilities.

Furthermore, its recruitment includes numerous former OpenAI researchers and OpenAI co-founder John Schulman, highlighting the "OpenAI diaspora" trend where expertise from pioneering institutions seeds new ventures.

THINKING
MACHINES

WATCH NOW
Inside OpenAI, the Architect of ChatGPT, featuring Mira Murati

Mira Murati,
CEO,
Thinking Machines Lab

05

PERPLEXITY AI

TOTAL FUNDING: **US$1.02BN**
EMPLOYEES: **11 – 50**
CEO: **ARAVIND SRINIVAS**
FOUNDED: **2022**

Aravind Srinivas co-founded this AI-native search platform in August 2022, combining real-time web retrieval with conversational responses whilst providing verifiable citations.

Today, the startup's monthly search queries exceed 780 million with projected annualised revenue reaching US$150m by mid-2025.

The company's transparency focus, avoiding opaque algorithms through citation provision, addresses growing user demand for verifiable information sources – which is a big shift in information retrieval expectations during the Gen AI era.

WATCH NOW
Introducing Comet: Browse at the Speed of Thought

TechCrunch
DISRUPT
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plexity

Aravind Srinivas,
CEO,
Perplexity AI

04

SCALE AI

TOTAL FUNDING: **US$15.9BN**
EMPLOYEES: **1,200**
CEO: **JASON DROEGE**
FOUNDED: **2016**

Scale AI began with Alexandr Wang, who became the youngest self-made billionaire at 24.

Now, Alexandr has moved to be head of Mark Zuckerberg's "superintelligence team" with the ambition of creating smarter-than-human AI.

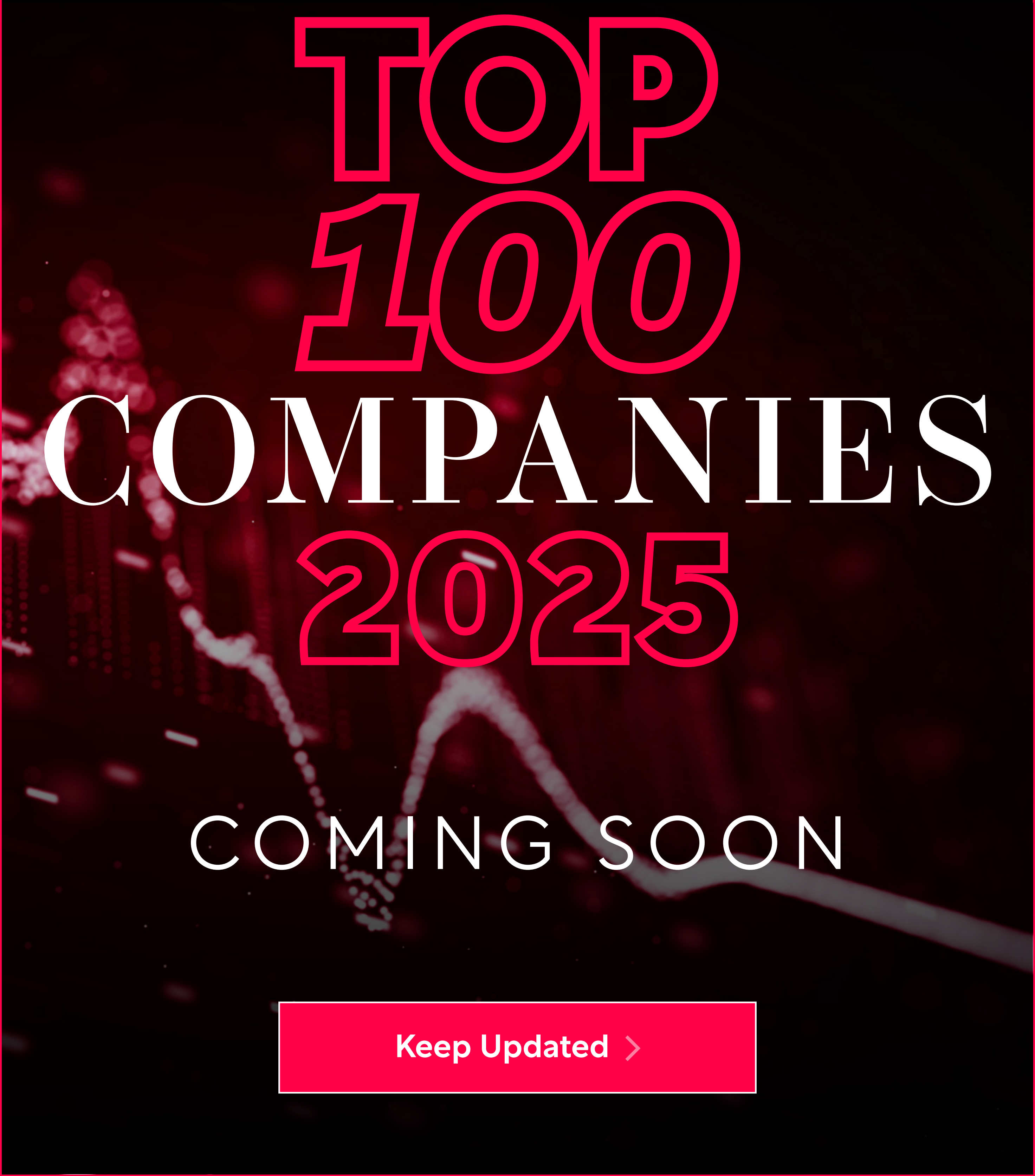
In his place, Jason Droege, the company's Strategy Chief Officer, is serving as interim CEO.

Proving the company's worth, Meta invested US$14.3bn in Q2 2025 in the quarter's largest funding deal, valuing Scale AI at nearly US$14bn.

Scale AI is known for providing high-quality data labelling and ML lifecycle management – and its clients include Microsoft, OpenAI and the US Army.

WATCH NOW
Scale AI: We voted on the internet's hottest AI takes

Jason Droege, Interim CEO, Scale AI



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03

xAI

TOTAL FUNDING: **US$17.1BN**
EMPLOYEES: **170,000**
CEO: **ELON MUSK**
FOUNDED: **1955**

Elon Musk launched xAI in March 2023 with the mission to “understand the universe” through advanced artificial general intelligence (AGI) development.

The flagship product Grok integrates with X (formerly Twitter) as an AI chatbot designed for superior mathematical reasoning and real-time information access.

Additionally, xAI’s “Colossus” supercomputer in Memphis, Tennessee impressively runs one million GPUs, making it the world’s largest such facility.

However, recently, the platform has faced backlash after its Grok chatbot used derogatory and antisemetic language, with the company apologising for the “inappropriate” posts.

WATCH NOW
OpenAI’s Sam Altman: Musk’s xAI is a serious competitor

Elon Musk, CEO, xAI

02

ANTHROPIC

TOTAL FUNDING: **US$14.3BN**
EMPLOYEES: **1,097**
CEO: **DARIO AMODEI**
FOUNDED: **2021**

What sets Anthropic apart from the rest is its Claude model that employs a "Constitutional AI" framework – embedding ethical guidelines directly into the system design.

Through this framework, the company's "helpful, harmless and honest" approach addresses regulatory compliance and ethical deployment concerns, particularly among enterprises in sensitive industries. This safety-first positioning also creates competitive advantage as AI risk awareness increases among potential clients.

Constitutional AI represents not merely ethical stance but strategic differentiation in a market increasingly focused on responsible deployment and regulatory compliance requirements.

ANTHROP\C

WATCH NOW
Anthropic:
Affective Use of AI

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Dario Amodei,
CEO,
Anthropic

Lenovo

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Sam Altman,
CEO,
OpenAI

CREDIT: JUSTIN SULLIVAN VIA GETTY IMAGES

01

OPENAI

TOTAL FUNDING: **US$57.9BN**
EMPLOYEES: **280**
CEO: **SAM ALTMAN**
FOUNDED: **2015**

OpenAI has developed from a startup to one of the top AI companies in the world – achieving a US$300bn valuation through a US$40bn funding round led by SoftBank in 2025. Sam Altman leads this AGI research laboratory pursuing AI systems whilst developing powerful foundation models including GPT-3 and ChatGPT.

Originally structured as a non-profit with capped-profit elements, OpenAI pioneered conversational AI tools that captured global attention and revolutionised human-computer interaction. Now, the startup's current development focuses on "reasoning models" functioning as personalised life assistants analysing conversations, emails and documents for tailored assistance.

WATCH NOW

Deploying AI: How businesses worldwide are succeeding with OpenAI

However, this ambitious vision of documenting personal information creates tension between commercial goals and privacy – because it highlights the critical challenge of balancing technological progress with ethical safeguards and maintaining public trust.

TO READ MORE TOP 10s, CLICK HERE

MICROSOFT AND TH
THE AI IN SPOR

The **Premier League** and **Microsoft** have launched a partnership to transform football with AI, using Azure, Copilot and OpenAI for 1.8 billion fans worldwide

WRITTEN BY: KITTY WHEELER

CREDIT: MICROSOFT

HE PREMIER LEAGUE
RTS EVOLUTION

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CHAMPIONS

Since the mid-20th century, technology and the sports industry have been intertwined – from early computerised performance analysis in the 1960s and 70s, to machine learning (ML) and motion tracking in the 1990s.

From ML and data analytics being applied to statistical analysis in baseball in the 90s, to IBM's "Deep Blue" supercomputer famously defeating world chess champion Garry Kasparov in 1997 – AI can now provide real-time analytics, injury prevention, personalised training and advanced fan experiences.

Today, AI is not just about bettering sport, but the people watching it.

With a global fanbase estimated at 1.8 billion, the Premier League is seizing this future. The league has announced a groundbreaking five-year partnership with Microsoft to become its official cloud and AI partner, a deal that has the worlds of sport and technology buzzing.

This collaboration goes far beyond stadium advertising. It aims to revolutionise the fan experience through a new AI-driven platform, the 'Premier League Companion.' The goal is to offer unprecedented real-time analytics, prevent injuries through predictive modeling and create personalised viewing experiences for supporters, whether they are in London, Lagos, or Kuala Lumpur.

as Microsoft CEO Satya Nadella puts it: "We're teaming up with the Premier League to bring its billion-plus fans closer than ever to the game they love."

The bigger purpose of the Premier League Companion

The Premier League Companion is powered by Microsoft's well known Copilot.

The platform acts like ChatGPT, but instead of helping write emails, it's diving into three decades of football history to answer questions like "Which keeper has made the most saves against Manchester United?" or "Show me every time Thierry Henry scored from outside the box."

The system runs on Azure OpenAI Service – Microsoft's cloud platform that gives access to GPT-4 and other large language models (LLMs). For football fans, that translates into having a conversation with the sport's entire digital memory bank.

Will Brass, the Premier League's Chief Commercial Officer says: "Our role is to create value for our clubs by engaging with as many fans as we can and bringing them into the Premier League ecosystem.

"Ultimately, a big part of that is making sure our channels are best equipped to engage with those fans and more importantly, deliver to fans what they want."

However, modern sports fans are scattered across platforms, chasing highlights on TikTok, stats on ESPN and transfer gossip on Twitter.

This is part of the motivation behind the partnership: to pull fragmented experience back together using AI as the glue.

WILL BRASS

TITLE: **CCO**

COMPANY: **PREMIER LEAGUE**

INDUSTRY: **FOOTBALL**

Will Brass is Chief Commercial Officer for the Premier League, leading global partnerships, brand innovation and commercial strategy in world football's most-watched competition.

Under the hood: How Azure makes football smarter

Microsoft isn't just throwing some chatbots at the problem, but is deploying Azure AI Foundry alongside agentic architecture – AI that doesn't just respond to questions but actively hunts through data sources to build comprehensive answers.

The raw material is staggering: 30 seasons of match statistics, 300,000 articles and 9,000 videos, plus real-time data from 380 live matches per season.

All of this gets processed, translated and personalised in real-time for fans across the world.

ML algorithms crunch live match data to generate insights tailored to individual users. Computer vision tech analyses match footage to spot tactical patterns, great goals and moments that matter – then packages them up based on what each fan actually wants to see.

CREDIT: MICROSOFT

Will Brass,
CCO,
Premier League

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How to Be the Generative AI Champion Your CIO and Organization Need

POWER BEHIND THE PREMIER LEAGUE

The Premier League Companion system runs on Azure OpenAI Service – Microsoft's cloud platform that gives access to GPT-4 and other LLMs.

Microsoft is deploying Azure AI Foundry alongside agentic architecture for the Premier League Companion.

"Moving the historic Premier League archive onto Azure, that's all part of our ability to both curate content for our own channels but also to better serve our broadcast licensees around the world," Will explains.

"It ensures that content, which is rich and exciting and historic, is as readily available as can be, both to ourselves and our partners."

Beyond fan-facing features, Microsoft is rewiring the Premier League's entire back office.

Microsoft 365 handles internal operations, Power Platform automates business processes, Dynamics 365 manages finances and Microsoft Security keeps everything locked down.

Later this season, Gen AI will also be able to create personalised video packages – such as highlight reels cut specifically for fans viewing history and favourite players.

Fantasy Premier League will get an AI assistant that analyses player form, fixture difficulty and injury reports to suggest players' next transfer, while real-time match insights will surface during games, pulling in GPS tracking data from players and high-speed camera feeds around stadiums – like having a tactical analyst talking to a fan while they watch.

Machine learning transforming how sports think and compete

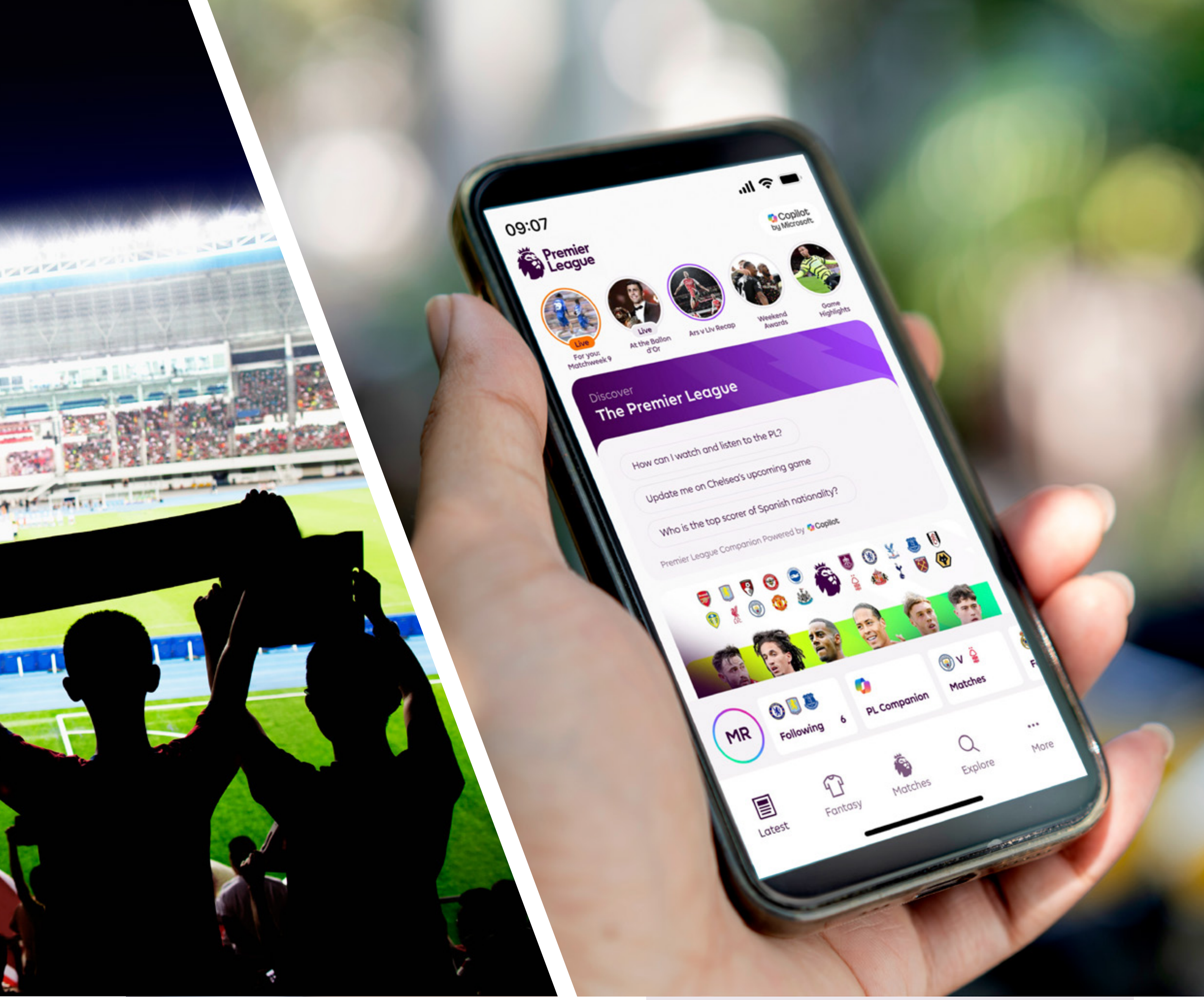
This Premier League coup is just the latest move in Microsoft's entry into the world of sports. The company has been methodically locking up partnerships with major leagues: NFL, NBA, LaLiga, Formula One. Each deal follows a similar pattern – Microsoft provides the AI brains and cloud muscle, leagues get capabilities they could never build in-house.

The Premier League deal lands in the middle of sports' AI gold rush, as the market explodes from US$4.56bn in 2024 to a projected US$27.87bn by 2032, according to Market Research Future.

ML's impact spans three key areas that matter to business leaders: operational efficiency, predictive analytics and personalised fan engagement.

The 2024 Paris Olympics showcased all three simultaneously – ML algorithms monitored hundreds of thousands of social media accounts for athlete protection, generated multilingual highlight packages automatically – and optimised energy consumption across venues in real-time.

The predictive analytics revolution is perhaps most striking. Companies like Catapult Sports have built US$100m businesses around wearables that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For you: Matchweek 9
Live
At the Ballon d'Or
Ars v Liv Recap
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Game Highlights
Discover
The Premier League
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Update me on Chelsea's upcoming game
Who is the top scorer of Spanish nationality?
Premier League Companion Powered by Copilot
MR
Following 6
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don't just collect data – they use ML models to predict injury risk with 85% accuracy up to seven days in advance.

Meanwhile, Zone7's algorithms analyse biomechanical patterns, training loads and recovery metrics to flag players heading for breakdown before coaches even notice fatigue.

ML is also dismantling traditional competitive moats.

Small football clubs in lower divisions now run the same sophisticated tactical analysis that Manchester City uses, thanks to cloud-based ML services and democratised computer vision tools.

> **"OUR ROLE IS TO CREATE VALUE FOR OUR CLUBS BY ENGAGING WITH AS MANY FANS AS WE CAN AND BRINGING THEM INTO THE PREMIER LEAGUE ECOSYSTEM"**
>
> **WILL BRASS,**
> CCO,
> PREMIER LEAGUE

CREDIT: MICROSOFT

Alexandra Willis,
Director of Digital
Media and Audience
Development,
Premier League

The technology stack that once cost millions and required teams of data scientists can now be deployed for thousands of dollars per month.

Computer vision paired with ML creates what industry insiders call ‘tactical intelligence at scale.’

Every touch, pass and defensive movement gets tracked and analysed for patterns that human coaches miss.

Algorithms identify emerging tactical trends before they become mainstream, spot opponent weaknesses in real-time and even predict player market values with greater accuracy than traditional scouting networks.

As a result, sports are becoming algorithmic in ways that mirror other data-driven industries.

“We would hope that for, say, a Crystal Palace fan, that the app will help the fan to discover what’s happening right now, here’s where to go and watch, how to listen, how to engage, and with a constant referral back to Crystal Palace’s platforms,” says Alexandra Willis, Director of Digital Media and Audience Development for the Premier League.

“But someone newer to the Premier League, who may not have identified a favorite club, we want to introduce them to the league at large with player-led storytelling and give them the opportunity to follow players they’re interested in, be recommended players and topics based on their nationality and then ultimately help them over time develop that affinity for whatever club or clubs they want to engage with.”

ALEXANDRA WILLIS

TITLE: **DIRECTOR OF DIGITAL MEDIA AND AUDIENCE DEVELOPMENT**

COMPANY: **PREMIER LEAGUE**

INDUSTRY: **FOOTBALL**

Alexandra Willis leads digital media and audience development for the Premier League, driving fan engagement with innovative data and AI-powered strategies after previously transforming sports content at Wimbledon.

The dark side of the AI revolution in sports

However, the AI sports revolution isn’t all highlight reels and perfectly optimised training sessions, as problems are brewing in the background. Job displacement tops the list of concerns.

When AI can generate match reports, create highlight packages and even provide commentary, what happens to sports journalists? Some roles will disappear, though new positions managing AI systems will emerge.

ACCORDING TO MARKET RESEARCH, THE SPORT INDUSTRY REACHED

US$4.56BN

IN 2024

THE PREMIER LEAGUE AND MICROSOFT IS AIMING TO IMPACT HOW

1.8 BILLION

FANS EXPERIENCE FOOTBALL THROUGH THE PREMIER LEAGUE COMPANION

CREDIT: MICROSOFT

Data privacy is another minefield. Sports organisations are hoovering up biometric data from athletes – heart rates, sleep patterns, movement analytics, even emotional states.

Who controls that data? How long is it stored? What happens when players move clubs or retire? The industry is still figuring out the rules.

Then there's algorithmic bias – the possibility that AI systems might unfairly favour or penalise certain types of players based on biased training data.

If a scouting algorithm was trained primarily on data from European leagues, does it properly evaluate talent from Africa or South America? These aren't hypothetical concerns.

Sports betting presents its own set of challenges. As AI becomes more sophisticated at predicting outcomes, regulators are scrambling to ensure fair play and prevent manipulation.

The line between statistical analysis and inside information gets blurrier every day.

FULHAMERICA

There's also the philosophical question of how much AI assistance is too much.

While everyone agrees that goal-line technology improves accuracy, what about AI systems that suggest tactical substitutions or predict opponent strategies? At what point does data analysis cross into unfair advantage?

"The magical thing about sport is that it's live and you have to be in the moment to experience it in the best possible way," Alexandra says.

"We have become attuned to wanting to complement the live experience with additional information – the concept of the second screen came about for that reason.

"So, making sure we're able to provide that information so that it is contextual and it is relevant is really important.

"The Premier League is a football competition proudly staged in England but globally loved and admired.

"So, we want to make sure that we're providing something for everyone."

PEKIN
INSURANCE

FROM ADVERSITY TO RESILIEN
PEKIN INSURANC
TECH-DRIVEN TU

PEKIN
INSURANCE

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CE’S
RNAROUND

WRITTEN BY:
JAMES
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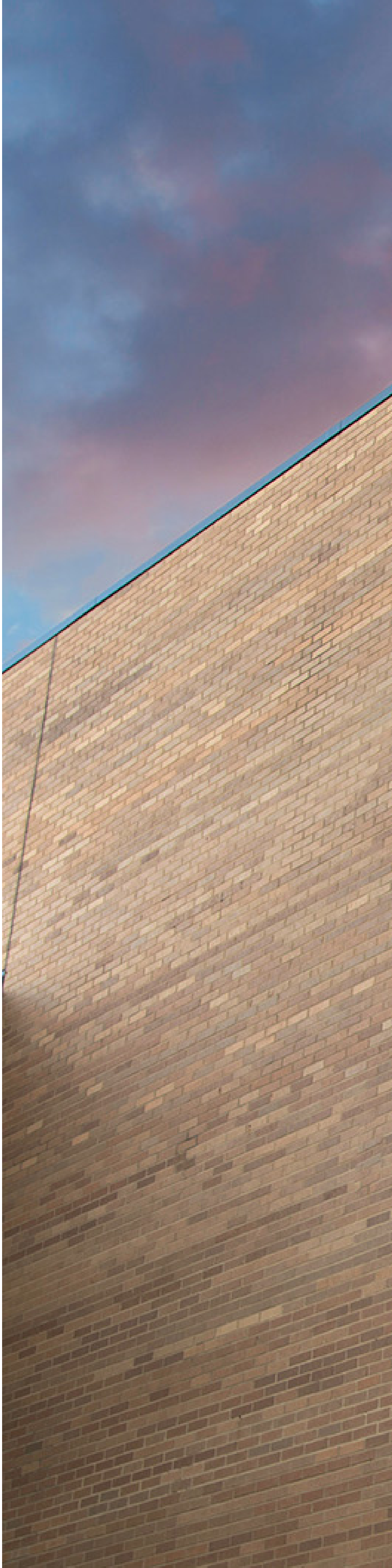
Pekin Insurance went from a $170M loss in 2023 to record-breaking profits in 2024, driven by bold decisions, strong platforms and strategic partnerships

In 2023, Pekin Insurance faced the worst financial loss year in its history. The Illinois-based property casualty and life insurance carrier recorded a staggering US$170m net loss. Just twelve months later, the company achieved its most profitable year in two decades.

Key to this remarkable transformation was the support enabled by Pekin's technology ecosystem led by Amy Bingham, the firm's Vice President and Chief Information Officer. It was her strategic deployment of technology partnerships and platform modernisation initiatives that played an integral role in the company's dramatic turnaround.

"In a one-year timespan, we went from having the worst loss year to the most profitable in almost two decades," Amy explains. The achievement represents an unprecedented recovery in an industry where such rapid transformations are virtually unheard of.

Pekin Insurance operates across 22 US states and employs around 700 staff members, while distributing its products through around 1,500 agencies and a network of 8,500 agents. Property and casualty insurance is offered in eight states, with strategic expansion plans for the next decade.



PEKIN
INSURANCE

Amy Bingham joined Pekin Insurance three and a half years ago after spending over 20 years with a large US carrier. Her mandate was clear: help Pekin grow and transform through modernised technology capabilities. Little did she know that her technology strategy would be key to helping her new company navigate the greatest period of intense operational and financial strain since its founding in 1921.

It wasn't just Pekin, though. In 2023, the insurance sector at large was facing unprecedented challenges, with climate-related risks and macroeconomic pressures dovetailing to create a perfect storm. Guy Carpenter, a global risk and reinsurance specialist, reported 28 separate billion-dollar disaster events in the US – among the highest on record.

For Pekin Insurance, the primary threat came from a series of severe convective storms concentrated in the centre of the US. These thunderstorms, often accompanied by high winds and hail, destroyed cars, homes and commercial properties indiscriminately. Inflation and rising replacement costs compounded the financial damage. "Our biggest impact is typically severe thunderstorms, primarily those that have hail damage coupled with very high wind impacts," Amy reveals.

The severity of the crisis extended beyond individual companies. AM Best, the American credit rating agency focusing on insurance, downgraded the entire personal lines industry outlook from stable to negative.

> **"In a one-year time span, we went from having the worst loss year to the most profitable in almost two decades"**
>
> **AMY BINGHAM,**
> CIO, VICE PRESIDENT,
> PEKIN INSURANCE

However, Pekin managed to maintain its A-minus excellent rating, providing a crucial foundation for its recovery efforts going forward.

How Pekin Insurance bounced back

By the second quarter of 2023, Pekin's leadership team knew they needed to take some swift action, implementing a series of sweeping measures to address the mounting losses and growing financial instability.

The firm temporarily halted all new business across personal lines for home and vehicle insurance – a policy which remained in place for an entire year. Pekin also decided to remove itself from geographical markets that it viewed as particularly high-risk, exiting all personal lines in Iowa while maintaining commercial lines and life operations.

The team also withdrew themselves from several high-risk product segments, ended relationships with unprofitable agencies and made the difficult decision

AMY BINGHAM

TITLE: **VICE PRESIDENT AND CHIEF INFORMATION OFFICER**

Amy Bingham is Vice President and Chief Information Officer at Pekin Insurance, where she leads technology strategy and execution across application modernization, infrastructure, operations, data, and AI. With over 25 years of experience in the insurance industry, she has held leadership roles at Fortune 50 and mid-sized carriers. Amy has driven enterprise-wide digital transformation and delivered innovative solutions that enhance user experience and business value. She is known for building agile, high-performing teams and fostering a culture of continuous improvement. Her leadership ensures Pekin Insurance remains competitive and resilient in a rapidly evolving digital landscape.

Beyond InsurTech: Behind ValueMomentum's Recipe for Success

ValueMomentum, a key partner of regional carriers like Pekin Insurance, focuses equally on strategy, relationships and technology to deliver strong results

ValueMomentum, a Global Services Provider exclusively focused on P&C Insurance headquartered in New Jersey, has made a name for itself in the insurance sector by helping to bring regional providers into the 21st century.

Specialising in property and casualty, ValueMomentum is renowned for its work across four main verticals: claims, product and underwriting, distribution and enterprise IT.

With this vertical operating model, the firm is able to deliver industry-specific expertise that makes a real difference. ValueMomentum has partnered with Pekin Insurance, a regional provider based out of the Midwest, for almost a decade now, helping the Illinois insurer to modernise all the while.

"They were on a legacy platform for a long time and, in 2015, their senior management took the call that they needed to transform their IT into a more modern ecosystem," says Avdhut Nadkarni, Client Partner at ValueMomentum, who has managed the Pekin account since 2017.

The importance of partnerships

In 2023, this focus on modernisation became more significant than ever before as Pekin Insurance grappled with one of the worst financial crises in its history after a string of extreme weather events wrought chaos across the US, causing claims to skyrocket.

By enlisting the help of partners like ValueMomentum and Guidewire – a cloud-based P&C insurance core systems software provider – Pekin's team was afforded the agility it needed to respond.

Pekin has been a Guidewire customer since 2015, and the insurer used Guidewire's core, data and digital products to help them rebound financially after 2023.

Guidewire's platform has enabled Pekin to respond rapidly to agent requests, customer expectations – especially when overloaded with claims from extreme weather - and a changing insurance market.

"It has been incredible to see Pekin flourish throughout their technology transformation. From replacing their legacy systems in 2015 to moving to Guidewire Cloud in 2021, it has always been clear that they are a team of forward-thinking innovators determined to be the best insurer they can," says Tara Vieira, Customer Success Manager at Guidewire

Strategy and technology

While ValueMomentum helps companies to evolve, it has been undergoing an evolution

> ***“Within the last 18 months there’s been significant progress in the Guidewire-Pekin-ValueMomentum three-legged stool with the way that this transformation has really supported the change in Pekin’s market success.”***
>
> **Alyssa Ozer**,
> Head of Partnerships and
> Alliances at ValueMomentum

itself too. Rather than simply providing IT services to support business goals, the firm now advises insurers on strategic direction.

“We understand your business, meaning we will help you achieve your business goals,” Avdhut explains.

The transformation has yielded measurable results for clients like Pekin Insurance. In the past two years, ValueMomentum has helped Pekin achieve three of its most important goals: geographical expansion, risk reduction and improving the ease of doing business.

“We understand their strategic business objectives,” says Avdhut. “It has always been a very collaborative culture. Pekin considers us as one of them.”

For Alyssa Ozer, Head of Partnerships and Alliances at ValueMomentum, the strength of a client relationship, like the one ValueMomentum enjoys with Pekin Insurance, is a real indicator of success.

“When you have a client that’s willing to publicly say, ‘Yes, I work with ValueMomentum, and it’s great’, that’s a really positive sign,” she says.

Avdhut echoes these sentiments wholeheartedly. “Our boss is our customer,” he explains. “There is no other boss that we have at ValueMomentum.”

Contact ValueMomentum to learn more about our vertical-led, exclusive focus on the P&C insurance market

Learn more

to reduce the size of its workforce – all measures designed to reduce risk concentration and improve the firm's chance of profitability.

With these changes in place, Pekin Insurance projected an 18% reduction in direct written premium for 2024 but in return would reduce exposure to storms and natural catastrophes by 50%. And as if that wasn't enough, this intentional revenue decline was accompanied by an effort to reduce forecasted expenses by 25%, totalling US$70 million.

"We needed to make decisions rather swiftly so that we could make the changes needed to realise the benefits," Amy explains. The ability to make rapid, data-driven decisions became crucial to the company's recovery.

The decision-making process relied heavily on modern technology capabilities. Pekin's Guidewire platform, combined with enhanced data analytics, enabled business leaders to model various scenarios. This technological foundation allowed the company to project the impact of different strategic choices on overall profitability.

Turning to technology in a crisis

With that target of reducing expenses by US$70m, Amy sensed an unexpected opportunity for the company. Rather than retreating from innovation during Pekin's crisis, she saw that, with a few

strategic investments, she and her team could reduce costs whilst also improving their capabilities.

So, with renewed determination, Amy presented a series of business cases for technology modernisation initiatives. The first focused on migrating the company's integration platform to WSO2, a provider of integration platform services. WSO2 is recognised by research firm Gartner as a visionary in the integration space, with platforms built primarily on open-source capabilities. "The heavy emphasis on expense reduction became the catalyst for the business case for these initiatives," Amy says.

The second major initiative involved partnering with One Inc, a provider of digital payment capabilities. This project aimed to modernise customer billing and claims payments through a digital wallet system. Pekin already had a relationship with One Inc for claims payments, making expansion into premium payments a natural progression.

The One Inc implementation enabled compliant and cost-effective credit card merchant fee processing. This modernisation effort contributed over US$3m in annual expense reductions while also improving Pekin's customer experience.

Case Study

Transforming Quality Engineering at Pekin Insurance

www.exavalu.com

Quality Engineering Assessment:

Crafting a Roadmap for Success for Pekin Insurance

The Challenge

Pekin, a large P&C insurance company, faced challenges with their Quality Engineering (QE) practices. Moving code to production required excessive effort, often involving business users for testing. Despite these efforts, defects still slipped into production. Without proper metrics, the root causes remained unclear, leading to low confidence in releases and growing friction between the business and IT.

The Solution

To address these concerns, Exavalu conducted a 10-week Quality Engineering Assessment. Exavalu structured the engagement into three phases: Discovery, Current-State Assessment, and Target State Definition with a strategic roadmap. During Discovery, Exavalu interviewed stakeholders across the business and IT to understand the current QE landscape and vision. A detailed analysis of testing processes, automation, defects, and quality artifacts followed. The Current-State Assessment identified process gaps and compared practices to industry standards. Finally, the Target State and Roadmap defined clear improvement opportunities, prioritizing quick wins and long-term initiatives.

The Results

The assessment gave Pekin clarity on their strengths, gaps, and opportunities. It pinpointed where test automation should be scaled, which teams needed development methodology support, and how existing tools could be better utilized. Skill gaps were highlighted, along with training and resource augmentation needs. The roadmap provided a detailed, phased plan, including measurable targets for automation coverage, quality metrics, and delivery improvement. With this guidance, Pekin gained a clear path to elevate QE maturity and confidently deliver high-quality software.

> *"Exavalu's expertise has been instrumental, not only in the legacy transformation, but also in supporting our delivery of a modern enterprise customer, self service portal"*
>
> Amy Bingham
> CIO, Vice President at Pekin Insurance

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> **"The heavy emphasis on expense reduction became the catalyst for the business case for these initiatives"**
>
> **AMY BINGHAM,**
> CIO, VICE PRESIDENT,
> PEKIN INSURANCE

Pekin also partnered with Exavalu, a technology services provider, to further target its CX. Exavalu is helping Amy and the team to deliver a sleek, modern customer self-service portal, making Pekin's digital ecosystem more efficient and more enjoyable for its users to navigate.

These technology modernisation efforts occurred alongside operational changes required for market exits and product portfolio refinements. The agile IT operating model that Amy had implemented enabled rapid priority shifts to meet evolving business needs.

The importance of partnerships

Amy's approach to partnerships in the tech sector reflected both some hard-nosed financial knowhow and some strategic thinking. The selection of WSO2 demonstrated the importance of vendor partnership throughout complex migration projects.

"They absolutely came to the table with a commitment and investment

IT Leadership Team

to make sure that this migration was successful," Amy explains regarding WSO2's partnership approach. The vendor's support during inevitable hurdles and setbacks proved crucial to project success.

One Inc's selection reflected strategic considerations around platform integration. As a marketplace provider for Guidewire, One Inc offered inherent integration capabilities with Pekin's core policy administration, billing, and claims platforms. This alignment simplified implementation and reduced integration complexity.

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IT'S ALL ONE

THE UNIFIED PAYMENTS PLATFORM
REVOLUTIONIZING INSURANCE

Accelerate claims payments and revenue collection while offering the digital-first experiences customers demand.

Through strategic partnerships, we've built a thriving ecosystem and vendor/provider network that sets the standard for insurance payment platforms.

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This strategy of collaboration extended beyond immediate savings too. Amy is a firm believer in the importance of building long-term relationships with vendors. In a sector so focused on costs, these things become more and valuable in a moment of difficulty.

Measuring success through data

The true test of Pekin's strategic response came in 2024's results. Despite the insurance industry facing such trying circumstances, Amy and her team managed to see through some remarkable improvements.

Firstly, the company reduced its storm losses by 65% compared to 2023, which translated to US$88m in avoided losses. It wasn't that Pekin simply got lucky with a year that contained fewer extreme weather events – it was down to strategy.

"This data proves that the actions we took had a meaningful impact in transforming the company," Amy explains. The results validated the difficult decisions made during the crisis period and demonstrated the effectiveness of the integrated approach.

Pekin recorded US$44m in net income for 2024, surpassing projections and targets by a huge distance. It represented a quite remarkable US$214m improvement from the previous year's US$170 million loss, making 2024 the firm's most profitable year since 2005.

The financial turnaround occurred despite 2024 being considered the fourth-highest disaster impact year on record across the United States. This context underscores the significance of Pekin's strategic mitigations and their effectiveness in reducing risk exposure.

How technology can transform the insurance sector

Amy highlights that Pekin Insurance's organisational values provided a foundation for the successful transformation. They include: being quick to communicate, respond and solve issues; innovating in products, technology and thinking; being nimble in adapting to challenges; and (perhaps most crucially) having a tech-savvy approach to business.

These values, established before all the adversity of 2023, proved to be instrumental in Pekin's response, with the company culture supporting those difficult decisions and the rapid changes required for recovery.

After recording such astounding successes in 2024, Amy is determined to maintain Pekin's momentum, hunger and spirit of collaboration.

After having to exit some of its personal lines product markets during its toughest moments, Pekin Insurance partnered with ValueMomentum to launch its Autocare Services Business Owners Policy (BOP) in 2025, Purpose-built for the auto care service industry, the product covers 17 distinct business classes with coverages tailoredto their unique operational needs.

WSO2

Power Your Modernization with WSO2

Just like Pekin Insurance, modern enterprises trust WSO2 to simplify integration, improve agility, and accelerate innovation across systems and teams

Discover What WSO2 Can Do for You

PEKIN
INSURANCE

Amy Bingham,
CIO, Vice President,
Pekin Insurance

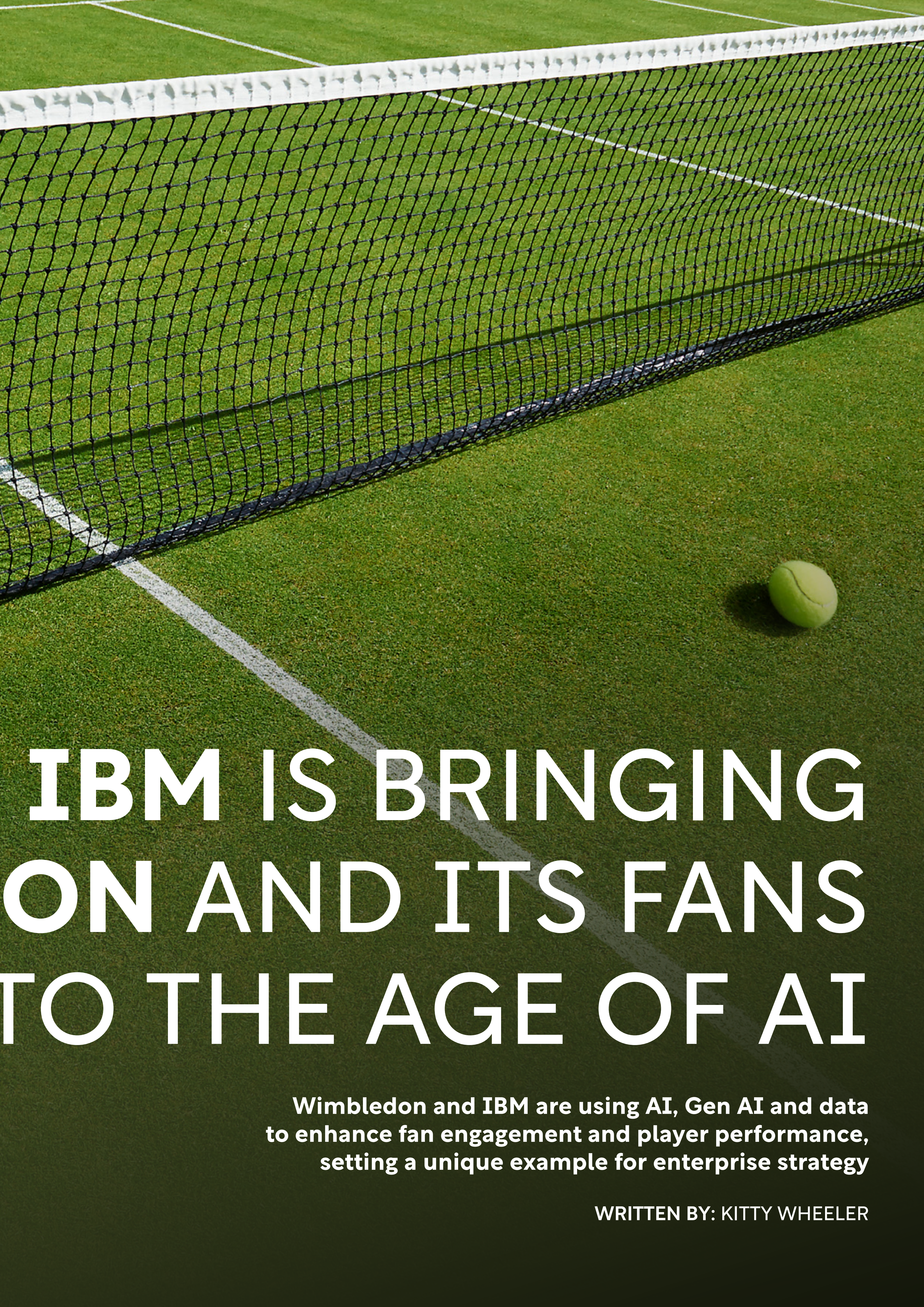
> **“We needed to make decisions rather swiftly so that we could make the changes needed to realise the benefits”**
>
> **AMY BINGHAM,**
> CIO, VICE PRESIDENT,
> PEKIN INSURANCE

The digital experience was designed with agents in mind, making it easier to navigate, quote, and deliver the right protection efficiently. Pekin will continue to partner with ValueMomentum on strategic projects to grow the business through additional product deployments and geographic expansion.

It’s easy to see why Amy wants to replicate the strategy she and her team first implemented back in 2023. “Those values absolutely played a part in the transformation that we’ve experienced over the last couple years,” she says.

She reflects on what has been an intense period of her professional life with great pride. “Being part of such a successful turnaround has been extremely rewarding. I’m very proud of Pekin’s senior leadership team across our business units that made very difficult decisions, and the technology teams that delivered on those transformational changes.”

HOW WIMBLED INT



IBM IS BRINGING
ON AND ITS FANS
TO THE AGE OF AI

Wimbledon and IBM are using AI, Gen AI and data to enhance fan engagement and player performance, setting a unique example for enterprise strategy

WRITTEN BY: KITTY WHEELER

CREDIT: CLIVE BRUNSKILL VIA GETTY IMAGES

ROUNDTABLE PANELLISTS

KEVIN FARRAR

HEAD OF SPORT PARTNERSHIPS AT IBM UK

IBM

JUDY MURRAY

TENNIS COACH

CHRIS CLEMENTS

DIGITAL PRODUCTS LEAD

AELTC

The crowd on the east side of centre court, during the Gentleman's Singles Final at The Championships Wimbledon 2025

Most executives know the challenge: audiences are fragmenting, attention spans are shrinking and everyone's scrambling to implement AI before their competitors do.

In sports, this problem is particularly acute.

Young fans watch highlights on TikTok instead of full matches on TV – and traditional broadcasters are losing ground to social platforms that deliver bite-sized content on demand.

The real challenge isn't technical – it's understanding what users actually want and delivering experiences that enhance rather than replace human connection.

This is where Wimbledon's story becomes compelling for business leaders.

While others chase AI trends, the All England Lawn Tennis Club has spent 36 years methodically building digital capabilities with IBM. Today, it processes 2.7 million data points during the tournament, powering everything from real-time match insights to conversational AI that lets fans explore match stories in their own words.

We spoke to Kevin Farrar, Head of Sport Partnerships at IBM UK, Chris Clements, Digital Products Lead at the All England Lawn Tennis Club and world-renowned tennis coach Judy Murray to find out more.

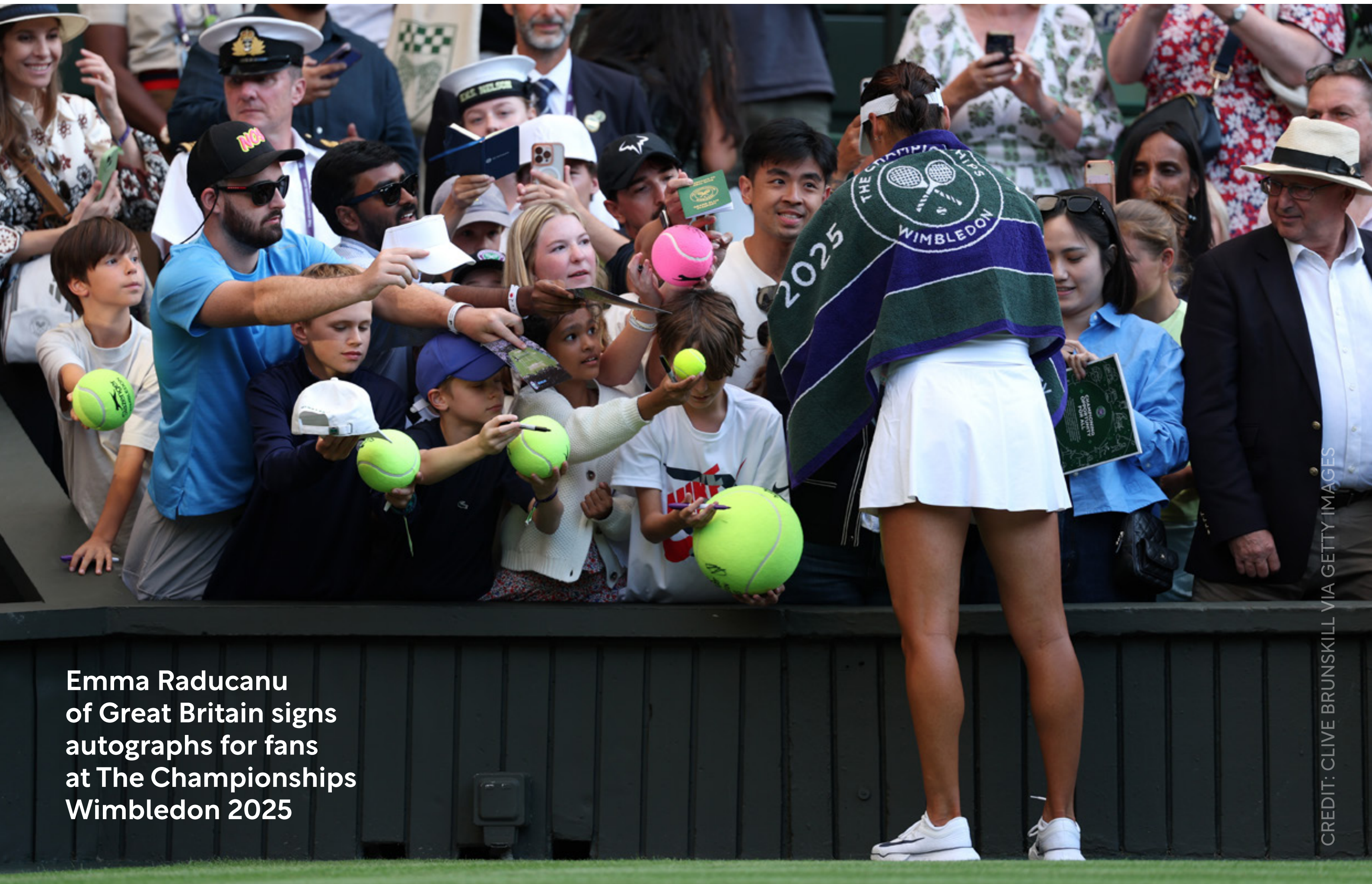
What do modern sports tennis fans look like and what's changing in how they engage with sport?

Judy Murray:
"I think it's all about engaging with those who are growing up with technology and understanding how they get their news and information – how they're viewing their sport.

I certainly see with all the young people that I come into contact with through the sporting world that it's all about snackable content.

It's the highlight reels, it's a shot of the day, it's the celeb watch, it's the kids' content, it's the behind the scenes."

> **"It's the highlight reels, it's a shot of theday, it's the celeb watch, it's the kids' content, it's the behind the scenes"**
>
> **Judy Murray,**
> Tennis Coach



Emma Raducanu of Great Britain signs autographs for fans at The Championships Wimbledon 2025

CREDIT: CLIVE BRUNSKILL VIA GETTY IMAGES

CREDIT: DAN ISTITENE VIA GETTY IMAGES

Marton Fucsovics of Hungary poses for a photo with a fan at The Championships Wimbledon 2025

What does Wimbledon's global audience look like today and what's changing?

Chris Clements:
"There are over 3 billion people in the world who are aware of Wimbledon as a brand and about a third of those have identified as having an interest in Wimbledon.

In 2024, our global audience was in excess of 670 million people that engaged with Wimbledon in any way.

We had over 13 billion engagements last year with Wimbledon globally, which works out at about 20 per individual that we've engaged with.

We produced over 5,200 pieces of content across all markets and platforms – and we grew our audience by 63% on social media, delivered 1.6 billion video views in total and on our app, we saw average app store reviews of 4.9 stars."

Kevin Farrar:
"We've also got Gen Z who are using social media to engage with content which creates great opportunities for us to engage with them.

In the past year, the share of 16 to 24-year-old sports fans who watch highlights online has grown by 22% and 66% of sports consumption comes from this core group of 20% of fans.

Our challenge is to see how we can tap into that and make best use of it in terms of engaging with people around the world through digital platforms."

How has tennis taken advantage of AI and Gen AI over the last few years?

Chris Clements:
"We were one of the very first sports organisations to start adopting AI in different elements back in 2017.

It started when we were inserting AI into our video highlights content production – and that allowed our content team to be able to optimise the highlights packages which were being created.

With that increased output, we've seen that the human team that's using the tools grew by over 40% in our content team from 27 to 40 people now.

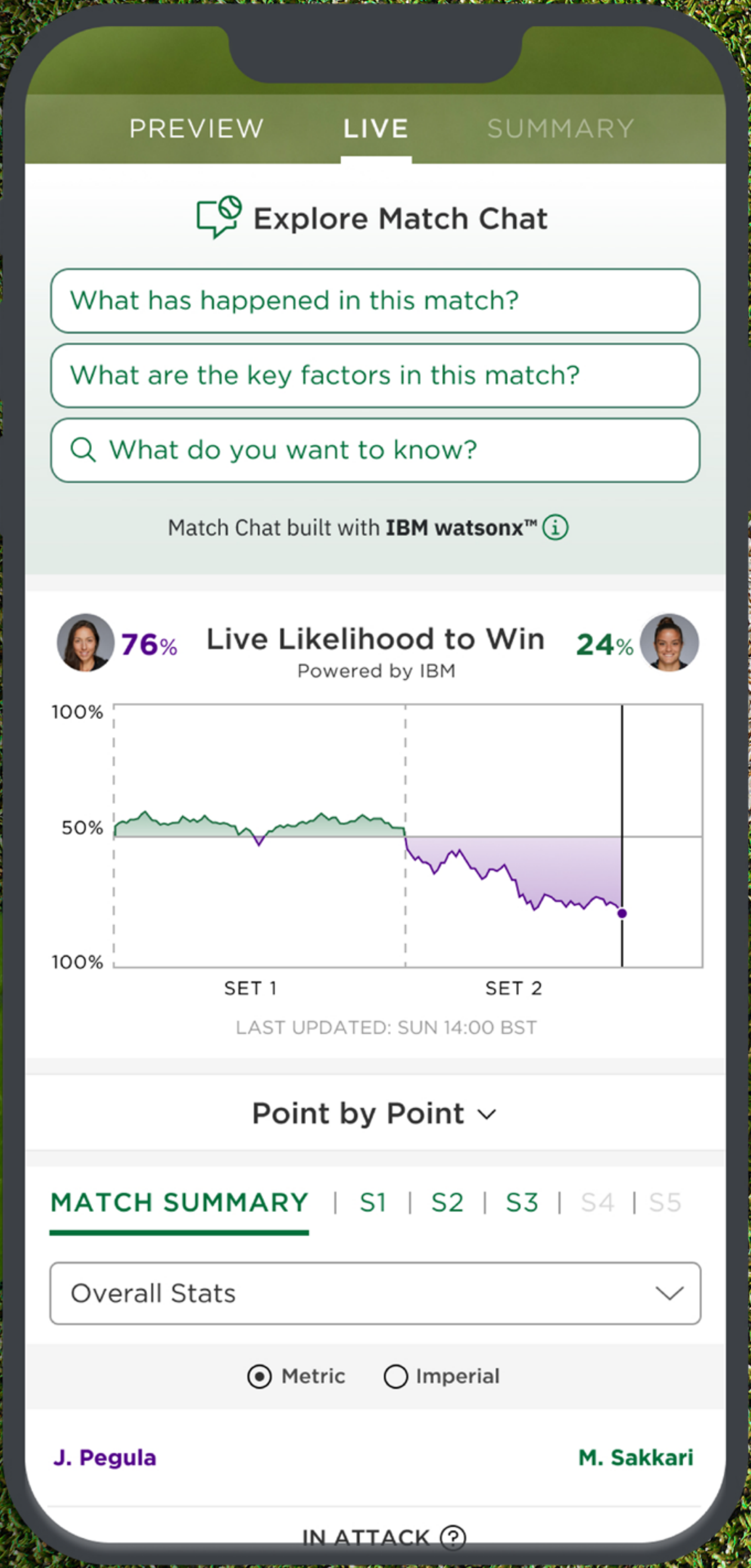
As these AI tools are becoming available, it means that we can get more value, which actually means we are putting more and more resources in terms of humans into these developments."

Kevin Farrar:
"Back in 1990 when we started, it was just the rudimentary score data and then each year we're always looking for new sources of data because with new data you can create new insights.

Now with the introduction of Gen AI and large language models (LLMs), it's not just the structured data but it's the unstructured data as well.

So by combining those data sources – structured data, unstructured data and this explosion of data – it enables us to create new additional insights and engage with fans in new ways, but also drive other areas like coaching and performance."

IBM



PREVIEW
LIVE
SUMMARY

Explore Match Chat

What has happened in this match?

What are the key factors in this match?

What do you want to know?

Match Chat built with **IBM watsonx™**

76%
Live Likelihood to Win
Powered by IBM
24%
100%
50%
100%
SET 1
SET 2
LAST UPDATED: SUN 14:00 BST

Point by Point
MATCH SUMMARY | S1 | S2 | S3 | S4 | S5
Overall Stats

● Metric ○ Imperial

J. Pegula **M. Sakkari**

IN ATTACK

CREDIT: CLIVE BRUNSKILL VIA GETTY IMAGES

Carlos Alcaraz of Spain at The Championships Wimbledon 2025

How have fans responded to AI?

Chris Clements:
"Last year we saw over 14 million views on pages that contained AI output and we saw really good retention numbers, people coming back to use those experiences time and time again.

In terms of time spent in that match centre, we saw a doubling of the amount of time that people were spending on those pages versus the year before.

In total AI highlights, we've seen over a hundred million views over the seven years."

Kevin Farrar:
"Sports fans love debate. What we've seen with Likelihood to Win [an AI tool for real-time updates] over the last few years is that it really resonates on social media.

For example, sparking that debate, getting the opinions out there and so this is extending that and a really great fan engagement opportunity.

The other thing fans can do on Likelihood to Win as well as seeing the match unfolding, is look back at any point in the match to see what the projected likelihood to win was at that point."

> **"In total AI highlights, we've seen over a hundred million views over the seven years"**
>
> **Chris Clements,**
> Digital Products Lead,
> **AELTC**

How has technology been used in other areas in tennis?

Judy Murray:
"I can remember in my early days when I was coaching juniors, it was all done with a pen and paper and you drew your diagram or your stick man.

Now when I look at the variety and volume of data and stats that is available to you as a coach, it allows you to analyse technique because you can go into the slow motion of it.

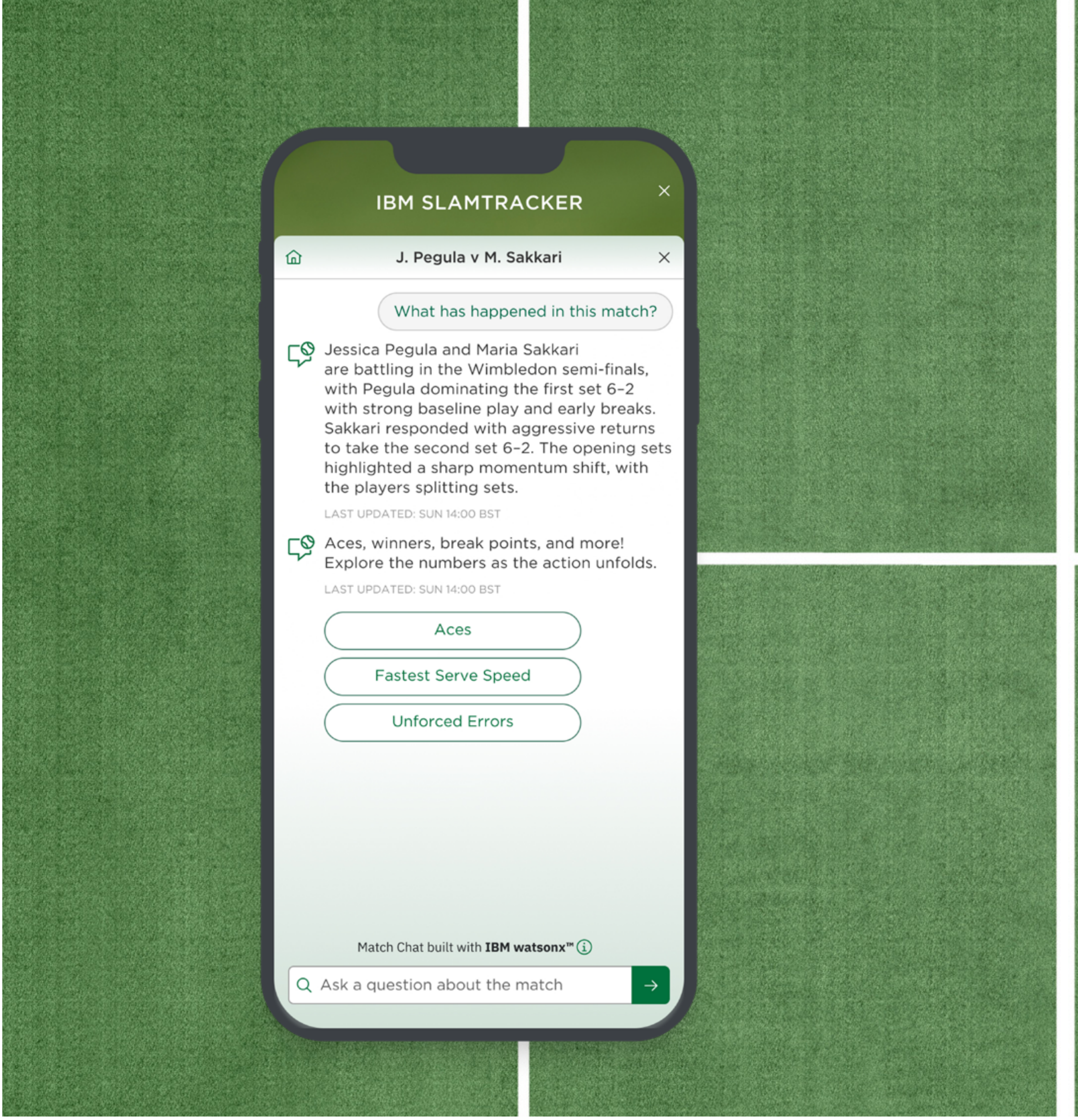
You can sometimes see where the serve started to drop off between set one to set two and even to set three, which would then help you to set the fitness training plans.

I remember going to US Open juniors one year and having a video camera that I stuck on the fence at the back of the court to film the opponents.

Now when I look at what's available on a click – and it's not just available to you before the match, it's available after the match, but it's available in real time as well."

CREDIT: HANNAH PETERS VIA GETTY IMAGES

Judy Murray at The Championships Wimbledon 2025


IBM SLAMTRACKER
J. Pegula v M. Sakkari
Aces
Fastest Serve Speed
Unforced Errors
Match Chat built with IBM watsonx™
Ask a question about the match

What has happened in this match?

Jessica Pegula and Maria Sakkari are battling in the Wimbledon semi-finals, with Pegula dominating the first set 6–2 with strong baseline play and early breaks. Sakkari responded with aggressive returns to take the second set 6–2. The opening sets highlighted a sharp momentum shift, with the players splitting sets.

LAST UPDATED: SUN 14:00 BST

Aces, winners, break points, and more! Explore the numbers as the action unfolds.

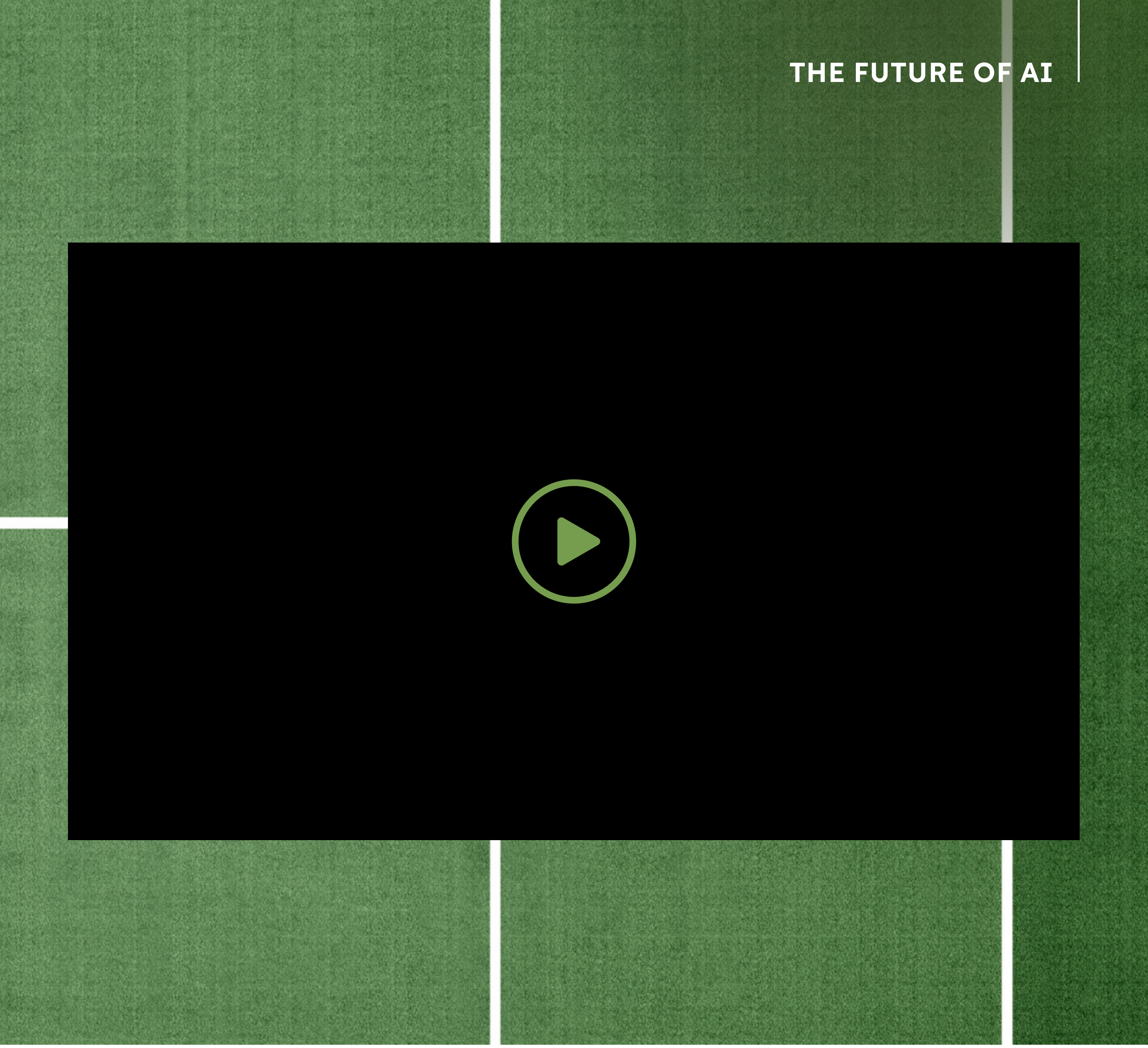
LAST UPDATED: SUN 14:00 BST

What new digital features are going to be launching in 2025?

Chris Clements:
“This year we are introducing Match Chat: a conversational interface that allows fans to selectively explore information about a match in near real time. It goes beyond one way information delivery to allow people to be able to delve into the story of a match on their own terms.

There are two elements: a guided discovery journey with initial prompts for fans who need guidance – and the ability to ask any question about the match for free form questions.”

Kevin Farrar:
“Underneath Match Chat is IBM’s Watsonx suite of products and, in particular for the virtual assistant, something called watsonx.orchestrate.



We've taken one of our foundation models, a LLM based on IBM Granite – and we've trained that model in the language of Wimbledon, the language of tennis. There's governance built into that, using trusted data sources to ensure that the responses are accurate, with fact checking built into the algorithms as well.

There is fact checking that's built into the algorithms as well – driving this experience through those technology capabilities."

Chris Clements:
"We'll also be adding live elements to Likelihood to Win.

During the match we'll see updates in real time with the live Likelihood to Win for the different players.

This allows you to very quickly come in and have a visual of what's happened in the match so far, how it's ebbed and flowed – and you can sweep back and look at any point in the match to see what the projected Likelihood to Win was at that point."

How will fans respond to these new features?

Judy Murray:
“Sport fans love to be able to share opinions, they like to be able to look at the momentum swings within something like a tennis match.

I think if I was looking at something like that and thinking, I wonder what happened at the end of that set for it to switch, you can go onto the match chat and find out what happened.

Did the roof close, did somebody roll over on an ankle? So if you haven’t been able to watch the match, you can actually have an understanding of what’s gone on to make that momentum swing change.”

Kevin Farrar:
“On Live Match, eventually, we will be able to respond to some of the broader questions people might ask, such as: ‘where can I get strawberries and cream while I’m on site?’

So far, the model’s been trained in a very specific domain, which is the match, using the match stats, historic stats all about the players – but ultimately this could be broadened into other areas.”

THE CHAMPIONSHIPS
WIMBLEDON

CREDIT: CLIVE BRUNSKILL VIA GETTY IMAGES

A spectator shelters from the sun under a Wimbledon umbrella during The Championships Wimbledon 2025

What are the possibilities for the future with the application of AI fan engagement?

Chris Clements:
"I think one of the things that we'll see in the future is that we'll become more and more personalised with that audience.

In the past we've brought in AI capabilities that offer new products and experiences, but one of the things we've not necessarily done is to completely redefine someone's experience of Wimbledon based on how they use the app and what we know about them.

So if you go on and we know that you've read to the end of a 600 word match report, then we'll start to serve up more of that content immediately when you land on the app."

AI LESSONS FROM

LOCKHEED

DE

MARTIN’S

EFENSE FRONTLINE

Only 4% of companies create substantial AI value – but **Lockheed Martin’s** mission-critical approach offers lessons for enterprise deployment

WRITTEN BY: MARCUS LAW

Fraser Hill has a problem with AI hype. As Vice President International Digital Enablement at Lockheed Martin, he's seen too many organisations chase expensive experiments that deliver little business value.

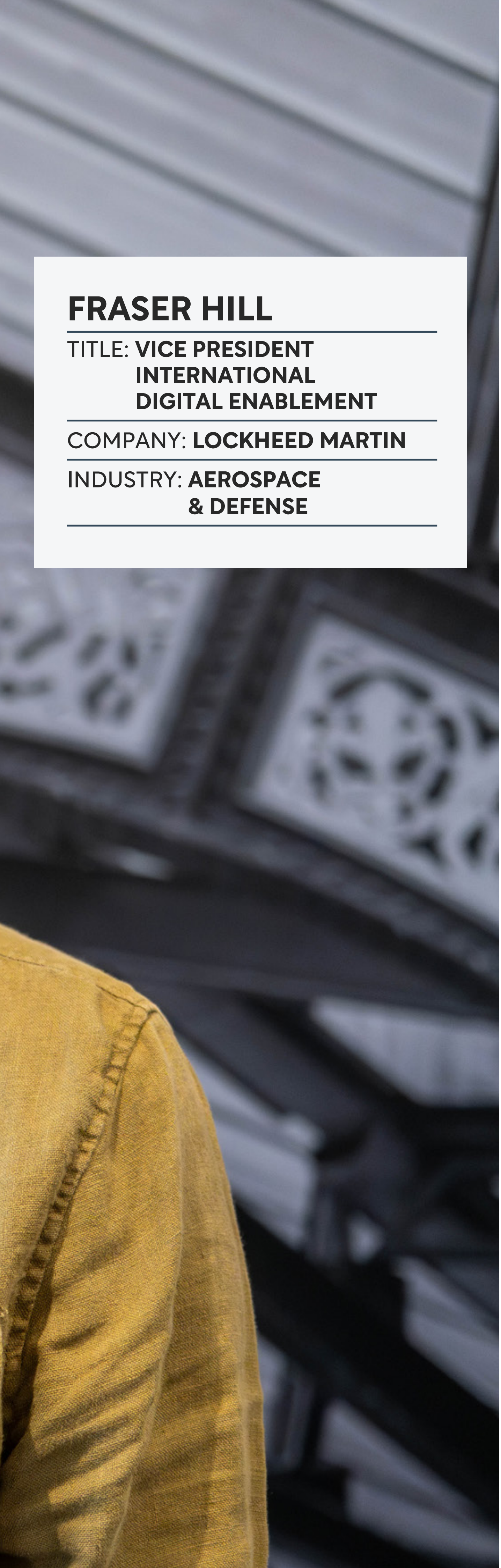
His frustration isn't unique. New research from Boston Consulting Group (BCG) reveals that despite widespread AI investment, only 22% of companies have advanced beyond the proof-of-concept stage to generate some value and only 4% are creating substantial value. Meanwhile, Deloitte's latest enterprise survey shows that nearly 70% of organisations had moved only 30% or fewer of their Gen AI experiments into production.

"There is a lot of marketing around the capabilities [of AI]," Fraser told attendees in a keynote session at Tech & AI LIVE in London. "Before you can get really into Gen AI, it's really important to understand just what those capabilities are so that you don't lead yourself down rabbit holes that end up being expensive and unused."

His perspective carries weight. Lockheed Martin deploys AI across hundreds of projects in 50+ countries, from aircraft design to missile systems. When your AI failures can mean mission failure – or worse – you learn quickly what actually works.

Lockheed Martin
F-35 Lightning II

Fraser Hill,
Vice President
International
Digital Enablement,
Lockheed Martin



FRASER HILL

TITLE: **VICE PRESIDENT INTERNATIONAL DIGITAL ENABLEMENT**

COMPANY: **LOCKHEED MARTIN**

INDUSTRY: **AEROSPACE & DEFENSE**

Three steps for success with Gen AI at scale

Jim Rowan, Applied AI leader at Deloitte Consulting, said last year that organisations have "arrived at a pivotal moment for Gen AI, balancing leaders' high expectations with challenges such as data quality, investment costs, effective measurement and an evolving regulatory landscape."

Through trial and often expensive error, Fraser's team identified three non-negotiable requirements for AI success at scale.

The first? High-quality data.

"If your data are pretty mucky, if they are not accessible, they are virtually useless," Fraser emphasises. His first recommendation? "Make sure that you have a world-class chief data officer who's building governance structures around data."

The challenge resonates across industries. Deloitte's research identifies "lack of clear data strategy" as one of four critical barriers to Gen AI success, noting that "Gen AI strategies may struggle without a clear data architecture that cuts across types and modalities, accounting for data diversity and bias."

The stakes are higher in defense applications, but the principle applies everywhere. When Lockheed Martin's AI systems must process massive data volumes to provide "actionable intelligence" in life-or-death situations, poor data quality isn't just inefficient but can mean mission-critical failure.

Henkel Adhesive Technologies

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Explore the expansive world of AI. Uniquely Wired is by, for, and about the data and telecom engineers who create the future.

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“AI ISN’T MAGIC. IT DOESN’T SOLVE ALL OUR PROBLEMS”

FRASER HILL,
VICE PRESIDENT INTERNATIONAL
DIGITAL ENABLEMENT,
LOCKHEED MARTIN

The second pillar focuses on model selection and security. “You need very secure models, and they need to be relatively relevant to the use cases that you are experimenting with,” Fraser explained. Operating in a secure environment where “adversaries are trying to find out what we’re up to on a daily basis,” Lockheed Martin can’t rely on publicly available AI tools.

Instead, the company has built internal capabilities like LM Text Navigator for translation and document summarisation, its own generative AI platform for secure internal use and Code Factory: an AI assistant that helped cut software testing cycles from weeks to as little as two days.

The third pillar is strategic integration and infrastructure. While experimentation might be fun, it “won’t result in actual business benefit,” Fraser notes. Instead, organisations need “a clear integration strategy for AI in how you operate your business.”

BCG’s research validates these concerns. It recently found that AI leaders “focus on core business

Lockheed Martin
F-35 Lightning II

processes and support functions, seeking to deploy AI for productivity, to reshape processes and functions, and to invent new revenue streams.” These organisations, it found, are “more ambitious, setting big targets (US$1bn in productivity improvements at a financial institution, for example) and investing in AI and workforce enablement.”

The human element: Trust, risk and skill

Beyond the technical and financial, success depends on trust. Lockheed Martin has made a systematic commitment to ethical AI through

4%

Organisations creating substantial value from AI investments

22%

Companies that have moved beyond AI proof-of-concept stage

its AI Ethics Advisory Committee, which ensures the development of "explainable, robust, trustworthy AI models." Rather than treating ethics as a compliance checkbox, the company aligns with Department of Defense AI Ethics Principles as foundational design requirements. This focus on governance is critical, as risk-related concerns – including regulatory compliance (36%), difficulty managing risks (30%) and lack of a governance model (29%) – are the top barriers to Gen AI deployment, according to Deloitte.

Fraser's most thoughtful insight, however, addresses the workforce. Drawing from organisational design experience, he warns against using AI simply "as a way of delivering efficiencies and productivity and staff savings.

"The calculator has been around since about 1952 or 1953," he says. "But yet when you learn mathematics at school, you still learn multiplication tables, long division, multiplication. Why? Because that muscle you need to do complex integrations and build algorithms is the foundational element of learning."

His recommendation is to be deliberate when it comes to deploying AI. “Rather than automating everything because you can, you should automate the stuff that is low-value adding and really focus on two things: what are the capabilities that I will need and how can I re-engineer work to give people the muscle experience they need?” The risk of over-automation is real: “There is a huge risk that companies will have staff that literally don’t understand the fundamentals. Once you’ve lost a muscle, you’re not going to get it back.”

WHY MILITARY APPLICATIONS GET AI RIGHT

While most enterprises struggle with AI implementation, defense contractors like Lockheed Martin achieve remarkable success rates. Their secret lies in treating AI as mission-essential technology:

Mission-Critical Mindset: When AI failures can mean life or death, organisations eliminate vanity projects and focus on solving real problems with measurable impact.

Infrastructure-First Approach: The AI Factory model centralises governance, security and compliance from day one, enabling rapid deployment without sacrificing safety.

Human-AI Collaboration: Rather than replacing human expertise, defense AI enhances decision-making speed and accuracy while maintaining human oversight for critical choices.

Ethical Integration: Built-in ethics committees and DoD AI principles ensure responsible deployment isn’t an afterthought but a foundational requirement.

Real-World Testing: Systems deployed in active operations face the ultimate stress test, revealing what actually works versus what sounds good in presentations.

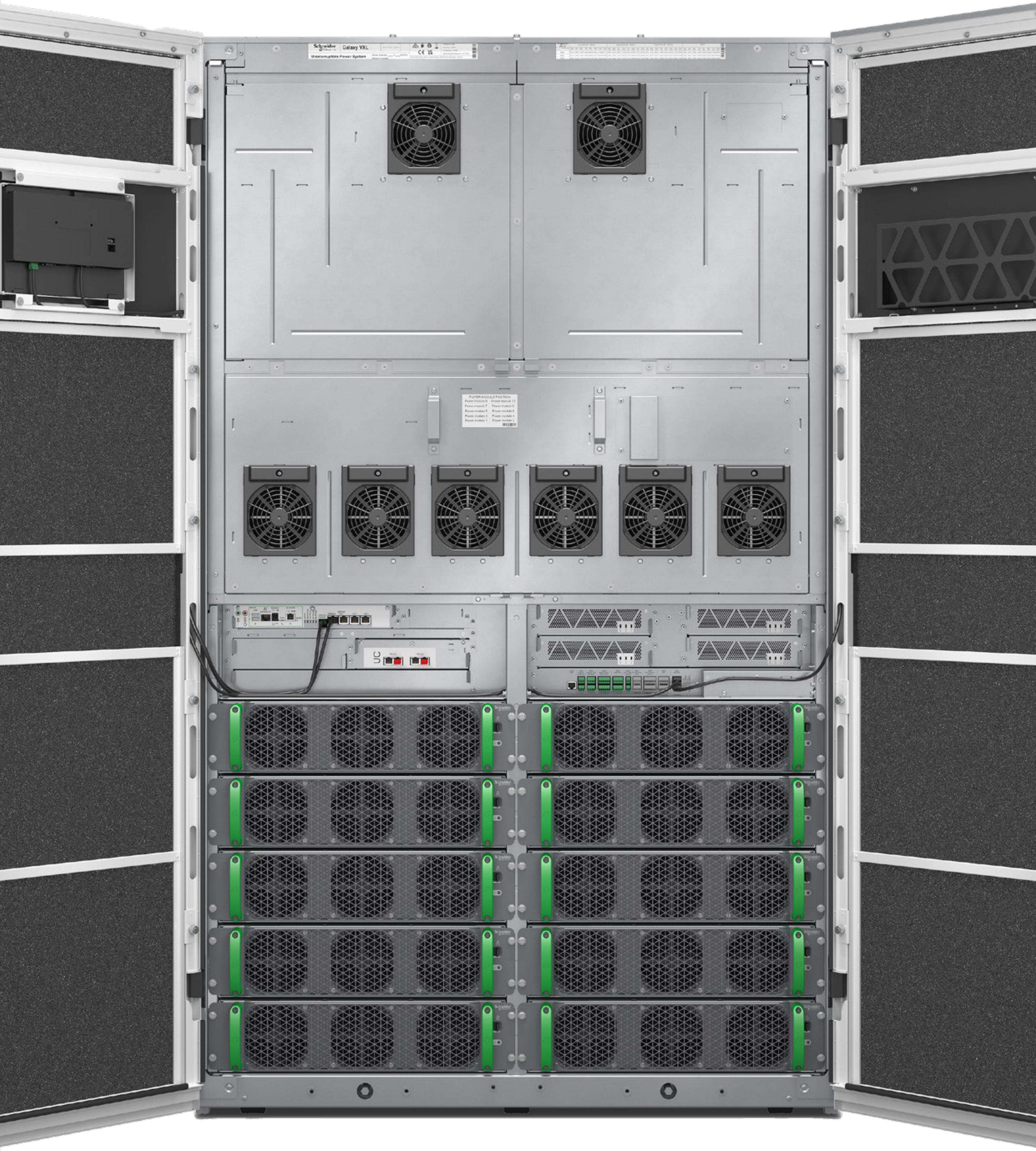
Life Is On | Schneider Electric

How Schneider Electric is Leading the Sustainable Data Centre Revolution

AD FEATURE

WRITTEN BY:
AMBER JACKSON

PRODUCED BY:
LEWIS VAUGHAN



Nirupa Chander explains how Schneider Electric helps customers balance innovation with sustainability, as AI workloads place more pressure on data centres

The data centre industry stands at a crossroads. As AI workloads demand unprecedented levels of computing power, data centre operators must engage more with sustainability imperatives to achieve more efficient operations.

This has led to a tension between innovation and environmental responsibility, which has quickly become the defining challenge of 2025: how can the data centre industry meet soaring AI demands without compromising sustainability commitments?

For Schneider Electric, this challenge represents an opportunity to demonstrate its extensive leadership in sustainable technology solutions. The French multinational corporation, which specialises in energy management and automation, is globally recognised for being at the forefront of this transformation: so much so that it was named the most sustainable company by TIME in June 2025.

> "We're experts in power and cooling and are providing technology solutions from Grid to Chip and Chip to Chiller"
>
> **NIRUPA CHANDER,**
> SVP FOR SECURE POWER & DATA CENTRES INTERNATIONAL, SCHNEIDER ELECTRIC

Nirupa Chander, Senior Vice President for Secure Power & Data Centres International at Schneider Electric, oversees the company's data centre business across emerging markets. Based in Dubai, she leads the business in all markets outside of Europe, US and China.

The scope of her responsibility reflects the global nature of the AI revolution, as events from the rise of DeepSeek to US tariffs have impacted the wider industry.

"We have many markets that are still developing their digital infrastructure," she explains. "We see a continued overall positive outlook. It's been a tumultuous six months in the industry, but what fundamentally hasn't changed is the overall outlook in the demand for digital infrastructure across the regions."

How power demand is reshaping infrastructure requirements

AI continues to change rapidly as adoption rises.

For instance, ChatGPT acquired its first 100 million users in just two

Nirupa Chander,
Senior Vice President,
Secure Power & Data
Centres International,
Schneider Electric

Pod and rack infrastructure for AI and accelerated computing

months, compared to nine months for TikTok. Likewise, the market for Gen AI is expected to hit US$1.3tn by 2032, according to Bloomberg, which PwC says could add up to US$15.7tn to the global economy in 2030.

So in just the last few years alone, surging demand for AI has to be served by the physical infrastructure – data centres – which take time to build.

"That's where we come in because we're a deployer of physical infrastructure to enable a lot of this AI demand that we see in user usage and applications," Nirupa explains. "The market is overall very dynamic and still positive."

Despite a very interesting start to this year, Gen AI is set to hit US$1.3tn by 2032 in terms of market value. However, Nirupa explains that the other challenge with AI concerns energy consumption.

Nirupa adds that where Schneider Electric's expertise comes in is in relation to energy demand: "Energy density for AI infrastructure is very high – up to 10 times for every single query which needs to be served. Power availability and capacity and how that energy is most efficiently deployed

when you're building this vertical infrastructure is a key topic as well."

As it looks ahead, Schneider Electric is looking to balance sustainability with growing power demands, especially when it comes to data centres and AI. This is particularly important, as average rack densities have moved from 10-15kW to more than 100kW per rack – an extreme transition in a short space of time.

"It requires a lot of technology to help deliver the power and cooling requirements for these machines to work," Nirupa says.

NIRUPA CHANDER

SENIOR VICE PRESIDENT, SECURE POWER & DATA CENTRES INTERNATIONAL

Nirupa Chander is the Senior Vice President, Secure Power & Data Centres, International Operations at Schneider Electric, leading over 1000 seasoned professionals to deliver innovative solutions for channel partners and customers in digital transformation and sustainability.

The Secure Power Division provides complete infrastructure solutions for data centres and industrial applications. Based in Dubai, UAE, she oversees operations in East Asia, Japan, Pacific, India, MEA, and South America.

Joining Schneider Electric in 2021, Nirupa has a background in Power Generation in India and Renewables, Mining, Transport and Microgrids in Australia and Singapore, focusing on energy technologies and building diverse teams for industry partnerships.

"That's where Schneider comes in. We're looking at how energy consumption in a data centre can be reduced. So what we're telling the market is that it's not only energy for AI, but it's also how you can use AI to improve energy efficiency within data centres.

"We're experts in power and cooling and are providing technology solutions from Grid to Chip and Chip to Chiller."

Accommodating both traditional and emerging workloads

Transitioning to a new approach within the data centre will require hybrid architectures, particularly when it comes to inference applications. With this in mind, Nirupa explains that the data centre industry is going to see a rising demand for more edge applications and Schneider Electric suspects most will be hybrid architectures.

"Across multiple markets, we're seeing more applications at the edge, so closer to where the demand is," Nirupa says. "So, while data gets trained in these mega data centres in the US or in other locations, the inference applications tend to be typically closer to where the applications are being used.

"To confront this, we are delivering solutions for both air and liquid hybrid cooling systems to help manage the thermal load of these data centres."

She adds: "It's about managing the thermal load generated by AI servers and chips, but also about how you save every single watt of power or cooling that is possible to ensure the most efficient way to build AI infrastructures – that are then being used for delivering productivity gains, improving quality of life, doing things like cancer research and supporting some very mission-critical applications."

> "motivair™ by Schneider Electric completes our solution portfolio around AI and Chip to Chiller for data centres"
>
> **NIRUPA CHANDER,**
> SVP FOR SECURE POWER & DATA CENTRES INTERNATIONAL, SCHNEIDER ELECTRIC

> “It’s about having efficiency across design, architecture and at product level as AI workloads continue to demand more energy”

NIRUPA CHANDER,
SVP FOR SECURE POWER
& DATA CENTRES INTERNATIONAL,
SCHNEIDER ELECTRIC

Schneider Electric has doubled down on its commitment to sustainability and now wins multiple awards, including the recognition from TIME, for its environmental strategy. A significant part of this is thanks its liquid cooling solutions, which help data centres meet their sustainability goals.

“Liquid cooling is the most efficient way to cool this level of thermal load that we’re seeing in AI compute now,” Nirupa explains. “High workloads generate a lot of heat and need a lot of cooling. The acquisition of Motivair marks an important step as its unique liquid cooling portfolio completes our Chip to Chiller portfolio bringing decades of experience in AI together with Schneider Electric’s sustainability expertise for our customers.”

The Motivair acquisition closed at the start of 2025, with Schneider Electric now harnessing its liquid cooling solutions as part of its portfolio to support continued AI growth.

“Motivair completes our solution portfolio around AI and Chip to Chiller for data centres.”

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as the

Cooling distribution units (CDUs), are also working to manage heat load transfer from the IT load and enhance its liquid cooling solutions for customers. In addition, Nirupa explains that Schneider Electric has modular solutions and reference designs that prioritise efficiency. There are a number of white papers to help customers design the topology that’s right for them more sustainably.

“With these solutions, what’s important is to understand the overall design of the system,” she says.

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MPACT
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TIME
WORLD'S MOST SUSTAINABLE COMPANIES
statista
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2025
THE WORLD'S MOST SUSTAINABLE CORPORATIONS ©

ChatGPT acquired its first

100m

users in just two months, compared to nine months for TikTok

Schneider Electric is partnering with chip manufacturers like NVIDIA, having announced at GTC Paris that they would be working together to power AI Factories. Both companies are eager to leverage their shared experience in AI-ready infrastructure, sustainability and grid coordination to respond to the European Commission's 'AI Continent Action Plan' – an initiative that outlines a shared mission to set up at least 13 AI factories across Europe, while establishing up to five AI gigafactories.

"We're working on reference architectures in terms of how to deploy high-powered machines with high cooling requirements in a standardised design architecture at scale," Nirupa explains. "Our partnership with NVIDIA is very important because it's a technology partnership. As technology changes

Geographies experiencing high-density demands and growth

- **Nigeria, South Africa, Kenya** and other countries across **Africa** are seeing data centre investments supported by continent wide efforts to improve connectivity and networks
- **Nairobi, Dakar, Johannesburg, Cairo, Kampala** and more have been acknowledged as centres of digital development and incubation as young, educated populations are coming into entrepreneurship
- The **Singaporean** Government digital infrastructure investment plan has seen US$3.3bn in 2024 alone
- **UAE** and **Saudi Arabia** governments looking to deploy gigawatt-scale AI infrastructure to support global AI demand
- **Brazil** currently has strong investment potential given interest in data centre infrastructure across the country, given its green power availability
- **India** is one of the fastest-growing markets in the world today and is investing heavily in renewables, prompting strong interest in data centre deployment
- **Japan** and **South Korea** have their own major investment plans around AI infrastructure

very fast, it requires the industry to work together to build solutions that can be deployed at scale and at speed.

"We're also working with internet giants, cloud providers, universities and academia partnerships to make sure that we're educating the industry and the up-and-coming generation in terms of how things are changing."

Staying competitive as a digital transformation leader

Looking ahead, as data centres face greater pressures on account of AI, Schneider Electric remains conscious of its position to bridge the gap between innovation and sustainability.

"The key is always staying a step ahead in terms of how technology

An AI assisted search is thought to be up to

10 times

more energy intensive than a regular text-based search engine query (IEA)

is evolving in the IT space," Nirupa says."This is critical for us to deliver solutions to meet future demand."

She credits the company's partnerships like those with NVIDIA and other manufacturers as essential in charting how AI architectures are changing.

"You can see that a lot of the new architectures are moving from alternating current (AC) to direct current (DC) because it's more efficient, which means that the way the electrical infrastructure needs to be designed is changing as well," she adds. "This means we have to keep up with what's happening with server manufacturers and the chip manufacturers to stay ahead of the game."

As AI moves towards inference workloads, data centre design is also expected to evolve.

"We can see architectures will become more decentralised, closer to where the demand is," Nirupa adds. "We therefore expect edge

The market for Gen AI
is expected to hit

US$1.3tn

by 2032 (Bloomberg), adding
up to US$15.7tn to the global
economy by 2030 (PwC)

data centres to become more popular as demand for overall infrastructure continues to grow.

"Likewise, modularity in design so that infrastructure can be deployed at speed and at scale is another key change – and that is how we're evolving our portfolio as well.

"We are also making sure that we're delivering products that drive the highest level of efficiency, whether it's on the cooling side or on the power side. One example is that Schneider Electric has just released the world's most efficient UPS (uninterruptible power supply), which has the highest rate of efficiency and the lowest footprint in the market. Our new Galaxy VXL UPS combines a compact, innovative, and highly efficient design with enhanced safety features, providing world-leading power protection for a wide range of AI, data centre and industrial applications. This ensures the high-density workloads of the future are supported by unparalleled levels of reliability."

She adds: "It's about having efficiency across design, architecture and at product level as AI workloads continue to demand more energy."

QMUL AND SCHNEIDER

MAKING HEAT
SUSTAINA

Queens' Building

CREDIT: JONATHAN COLE

ELECTRIC WASTE ABLE

QMUL, in partnership with Schneider Electric, transforms AI data centre waste heat into sustainable heating using machine learning infrastructure

WRITTEN BY: KITTY WHEELER

Queens' Building

Schneider Electric
APC
by Schneider Electric

Schneider Electric
InRow RC

AI may be the key to solving some of humanity's greatest challenges, but the computational power required to fuel this revolution comes at a staggering environmental cost.

The engine room of AI – the data centre – is grappling with an energy crisis. AI training models push thousands of Graphics Processing Units (GPUs) to their limits for weeks on end, generating enough waste heat to warm a small town. This thermal byproduct is typically treated as an expensive problem to be managed.

But what if that problem was actually a solution?

In East London, an innovative project by Queen Mary University of London (QMUL) is flipping this paradigm on its head. Instead of venting this valuable energy into the atmosphere, they are capturing it to heat their campus, turning a computational burden into a community asset.

When GPUs become the workhorses of AI

The partnership with Schneider Electric has created something that sounds almost too good to be true: a data centre that helps the environment rather than just promising to offset its effects later.

"The project at Queen Mary demonstrates how digital infrastructure can be a catalyst for net zero, allowing today's organisations to benefit from the power of advanced computing," says Mark Yeeles, Vice President, Secure Power division, Schneider Electric UK and Ireland.

"By combining innovative engineering with sustainable data centre solutions, the university has developed an enhanced infrastructure platform that will meet its research computing requirements, while supporting its sustainability strategy."

The chips powering today's AI revolution weren't designed for AI workloads at all.

GPUs started life making video games look better, but their parallel processing architecture happened to be perfect for the calculations that neural networks love.

Companies like Nvidia, for example, have become the kingmakers of the AI boom, with processors that don't just use more power than traditional server chips, but operate in an entirely different league, requiring 30 to 50 kilowatts per rack compared to the 5 to 10 kilowatts that used to be considered normal.

The QMUL project shows how infrastructure design has had to evolve around these new thermal realities.

Traditional data centres were built with the assumption that servers would run intermittently and generate manageable amounts of heat, now AI workloads have thrown that assumption out the window.

What makes the university's approach particularly clever is how they've stopped treating computing hardware and building systems as separate problems.

Most data centres are still designed with disjointed communication between compartments, but QMUL has built something more like a modern smart home, where everything communicates.

MARK YEELES

TITLE: **VICE PRESIDENT, SECURE POWER DIVISION, SCHNEIDER ELECTRIC UK AND IRELAND**

COMPANY: **SCHNEIDER ELECTRIC**

INDUSTRY: **ELECTRICAL EQUIPMENT**

Mark Yeeles leads Schneider Electric's UK/Ireland data centre infrastructure solutions, championing sustainable AI computing through heat recovery systems and digital optimisation technologies that transform energy-hungry processors into community assets.

Schneider Electric turning waste heat into campus comfort

Traditional data centre thinking treats heat as enemy number one, but the QMUL project flips this on its head by treating thermal output as a valuable product in its own right.

Schneider Electric achieves this with its EcoStruxure system which monitors how hot the servers are getting as well as actively coordinates computing workloads with the heating demands of campus buildings.

It's like having a very sophisticated thermostat that understands both quantum physics calculations and whether the students in the dorms need their radiators turned up.

TECH & AI LIVE
CYBER LIVE
Mark Yeeles
Vice President, Secure Power Division
Schneider Electric
SPEAKER

Mark Yeeles,
Vice President,
Secure Power Division,
Schneider Electric

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> **"THE PROJECT AT QUEEN MARY DEMONSTRATES HOW DIGITAL INFRASTRUCTURE CAN BE A CATALYST FOR NET ZERO"**
>
> **Mark Yeeles,**
> Vice President,
> Secure Power Division,
> **Schneider Electric**

The old facility was a classic example of legacy infrastructure trying to cope with modern demands.

Built for a less energy-intensive era of computing, it couldn't handle the power requirements of today's AI workloads while simultaneously doing anything useful with all that waste heat.

The cooling systems were working overtime just to keep equipment from overheating, with all that thermal energy simply blown into the London air.

Advanced Power Technology, the specialist integrator that made this technical marriage work, had to essentially build a bridge between two different worlds.

On one side, there is high-performance computing (HPC) infrastructure that needs to stay cool enough to function reliably. On the other, there is a university campus with buildings that need heating and hot water.

"Schneider Electric's EcoStruxure Data Centre solutions were essential to help Queen Mary bring together its power, cooling, racks and management systems and support the deployment of its high-density IT equipment needed for its research," says John Andrew, who manages technical sales at Advanced Power Technology.

The beauty of the system lies in how it handles the unpredictability of both computing workloads and heating demands.

Machine learning algorithms – powered by the same AI infrastructure they're managing – predict when the servers will be working hardest and coordinate this with when the campus buildings will need the most heat.

From computational burden to campus asset

Traditional data centres spend enormous amounts of money removing heat that serves no purpose beyond keeping expensive equipment from melting.

Yet QMUL has turned this cost centre into something approaching a profit centre by making waste heat into a campus utility.

The heat recovery system works through underground pipes that distribute thermal energy captured from server cooling systems to buildings across the campus. It's essentially district heating powered by AI research.

Professor Jonathan Hays from QMUL says: "The support we've had from APT and Schneider Electric has been unparalleled. Both companies came together to help us develop an exciting and innovative project which would enable us to provision for the future.

"The biggest impact is that we were able to deliver on what we promised while improving our sustainability," he says.

"The new data centre is more reliable and efficient than ever and through the heat recovery, we have significantly reduced our spending on heating and hot water, while gaining enhanced reputational benefits from taking a lead on sustainability within our data centre operations."

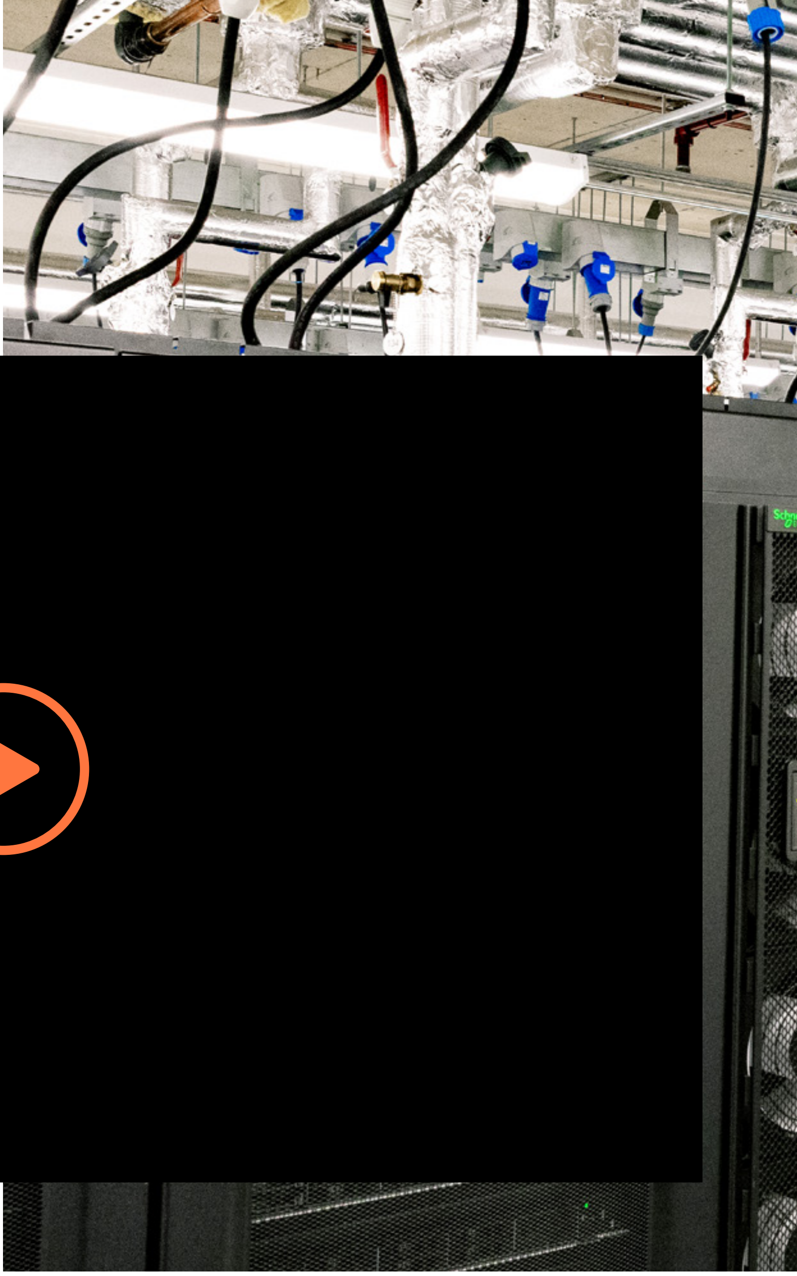
JONATHAN HAYS

TITLE: **PROFESSOR**

COMPANY: **QMUL**

INDUSTRY: **RESEARCH**

Dr Jonathan Hays is an expert on particle physics, and is based at QMUL's School of Physics and Astronomy. He is Head of QMUL's Particle Physics Research Centre.



The university, which has been around since 1887 and has seen its share of technological revolutions, is now hosting about 25,000 students.

The environmental benefits go further than just reducing carbon emissions – by displacing natural gas that would otherwise heat campus buildings, the system cuts the university's direct emissions while making the computing infrastructure useful rather than just necessary.

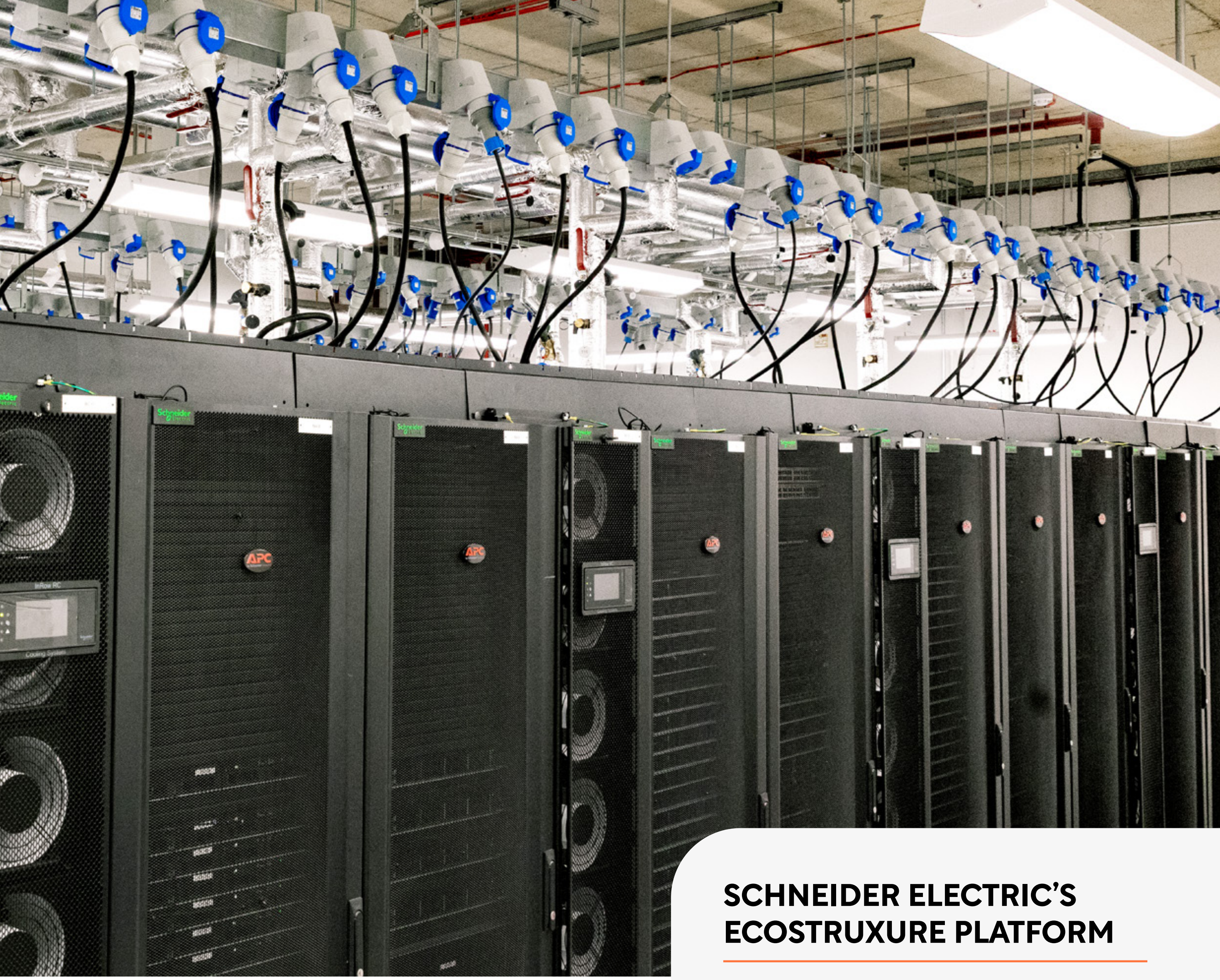
The results of AI optimising itself

Perhaps the most intriguing aspect of this setup is how AI is being used to optimise AI infrastructure.

The monitoring systems use ML to predict when servers might fail as well as how different types of AI workloads will affect both computing performance and heat recovery output.

This creates a feedback loop where the infrastructure becomes genuinely intelligent rather than just automated.

The system learns the thermal signatures of different research projects – training a language model (LM) produces different heat patterns than processing particle physics data – and adjusts both cooling and heat recovery accordingly. The predictive capabilities extend beyond just the



data centre itself to consider weather forecasts, building occupancy patterns and academic calendars to optimise operations days in advance.

If a cold snap is coming and students will need more heating, the system can schedule intensive computing tasks to coincide with peak heating demand.

This level of coordination between computing infrastructure and building systems is new in data centre design, introducing a new category of computing infrastructure – facilities designed from the ground up to integrate with their surrounding environment rather than simply minimising their impact on it.

SCHNEIDER ELECTRIC'S ECOSTRUXURE PLATFORM

The AI-powered EcoStruxure system monitors server heat and synchronises workloads with campus heating demand in real time

Waste heat recovery captures thermal energy from servers and distributes it as sustainable district heating across campus buildings

ML algorithms predict peak server workloads and align them with campus heating needs for optimal efficiency

Integrated infrastructure design unifies data centre power, cooling and building heating systems for seamless communication and control

Predictive maintenance and optimisation uses AI to anticipate server failures and adjust cooling and heating dynamically based on workload types.

The bigger picture for AI infrastructure

What makes this story particularly inspiring for the AI industry is how it demonstrates that the environmental challenges of AI might not be insurmountable obstacles but design problems waiting for clever solutions.

The computational demands of AI aren't going to decrease, but projects like this show how infrastructure can evolve to handle these demands more intelligently.

The integration of computing hardware with building systems also points toward a future where data centres become community assets rather than just necessary evils that consume resources and generate noise.

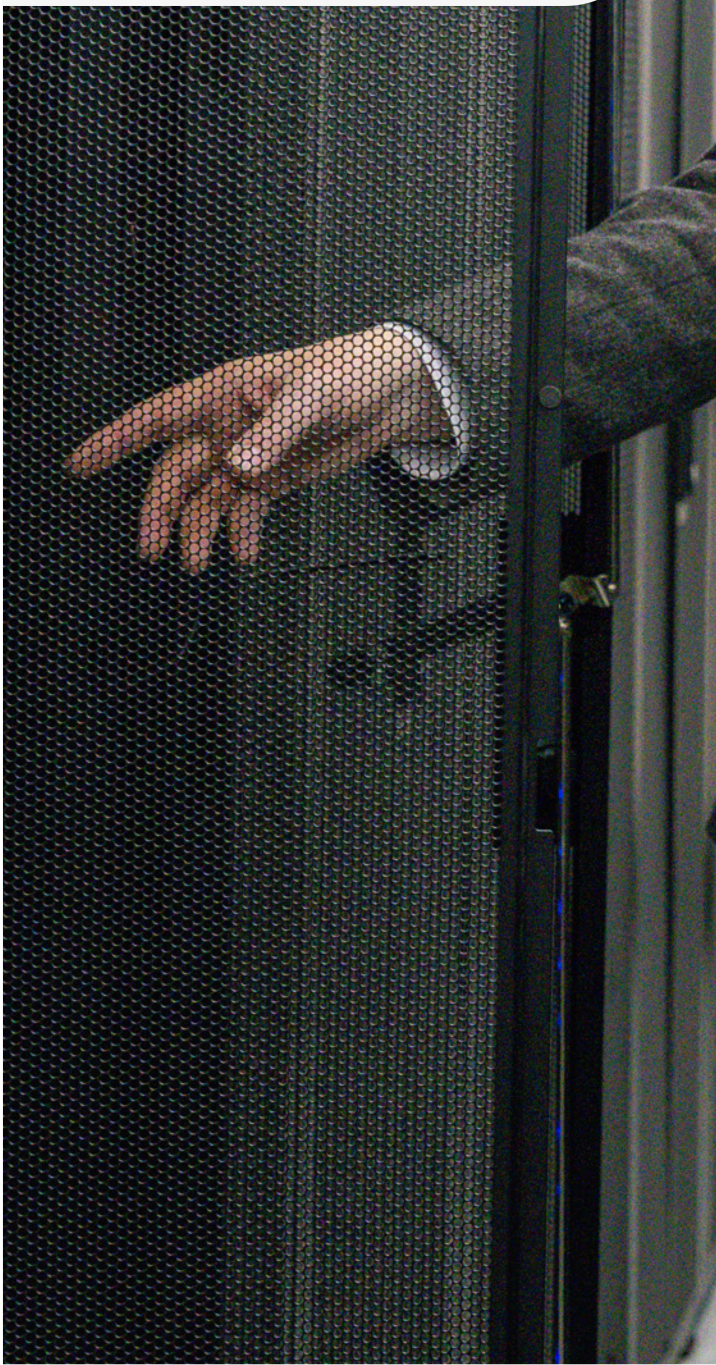
Jonathan says: "We have significantly reduced our spending on heating and hot water, while gaining enhanced reputational benefits from taking a lead on sustainability within our data centre operations."

The financial case for heat recovery also becomes increasingly compelling as energy costs rise and carbon pricing mechanisms make waste heat increasingly expensive to simply throw away.

For universities and other organisations with substantial heating demands located near computing infrastructure, the QMUL model offers a template that addresses both operational costs and environmental responsibilities.

"This approach also created a platform to support its sustainability objectives via heat reuse, while enabling the University to act proactively and preventatively to intercept and remediate potential future issues," John concludes.

> **"THE NEW DATA CENTRE IS MORE RELIABLE AND EFFICIENT THAN EVER"**
>
> **Jonathan Hays,**
> Professor,
> **QMUL**



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ADVANCED POWER TECHNOLOGY

HOW COLLECT IS DIGITISING THE WORLD OF COLLECTIBLES

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PSA $16.62K 1.3%
Home
Grading
Collection

Chief Technology Officer **Dan Van Tran's** AI strategy is redefining authentication, valuation and trust for millions of collectors worldwide at Collectors

In the business of hobbies, Collectors are revolutionising the space at breakneck speed. The California-headquartered business has become the global powerhouse in authenticating, grading and vaulting collectibles – handling everything from sports cards and coins to comic books and magazines.

Collectables are not, as some might think, just nostalgia items. In the digital-first era, they are increasingly regarded as assets – tradable, insurable and often extremely valuable. This underpins Collectors' goal: to inspire the world to collect by making the process safe, accessible and fun. And, unsurprisingly, technology sits at the heart of this ambition more than ever.

Collectors is the parent company behind industry leaders including Professional Sports Authenticator (PSA) and Professional Coin Grading Service (PCGS), boasting responsibility for more than 100 million items globally. In recent years, the company has seen an explosion in demand, with the COVID-19 pandemic accelerating a widespread return to collecting and trading. What was once seen as a niche hobby is now a multi-billion-dollar industry.

Dan Van Tran,
CTO,
Collectors

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DEREK JETER
NEW YORK YANKEES

DAN VAN TRAN

TITLE: **CHIEF TECHNOLOGY OFFICER**

Dan Van Tran is the Chief Technology Officer at Collectors, a multibillion-dollar global leader in authentication and grading of collectibles. He oversees an international engineering organisation of 200+ professionals, modernising platforms and launching AI-powered innovations. A passionate collector himself, DVT holds one of the world's largest Alex Morgan soccer card collections. Additionally, he serves as Vice Chair of the Raritan Valley Community College Foundation, supporting student scholarships, academic excellence, and community enrichment at one of New Jersey's premier community colleges.

> **"Transparency really has been key in us growing this hobby and increasing the number of collectors that we see come through our doors as well as into the industry in general"**

Dan Van Tran,
Chief Technology Officer,
Collectors

"To give you an idea of the scale in trading cards alone, we used to see tens of thousands of cards a month. Now, we're seeing anywhere between 1.5 to 2.5 million a month," says Collectors' Chief Technology Officer, Dan Van Tran. More well known as DVT, he emphasises the immense scale of the business, as well as the amount of both human and technological power required behind the scenes to keep Collectors running.

Collectors' digital transformation

The business is embarking on a radical digitalisation and modernisation journey, using its industry-leading services as the foundation. Mixed with the creativity and passion of its employees, it is sculpting the future of both Collectors and the industry for the benefit of all.

Collectors' transformation involves moving from a business with a proud but dated technical backbone into something fit for the 21st century: a change that requires more than a few tweaks. At its peak, Collectors was facing a backlog of up to 14 million cards, causing a temporary pause in services.

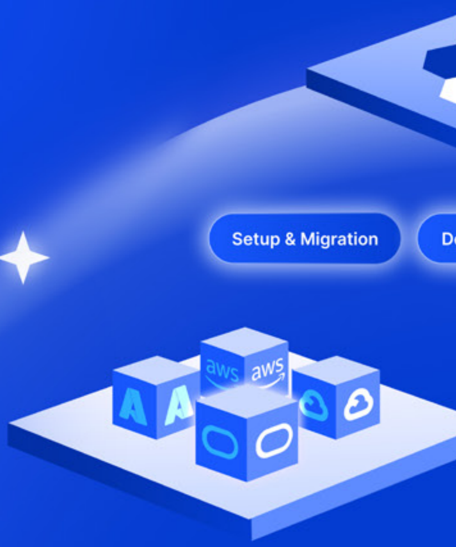
"I had to balance clearing a backlog while continuing to build new technology and ship things," DVT explains. "The focus was on how we could both scale and solve the real immediate problem but not do it at the cost of losing what made the company great to begin with. It's been a fun challenge."

At the core of Dan's work is a belief that collecting shouldn't be exclusive, opaque or intimidating. As Dan emphasises, collecting can be overwhelming for beginners in the hobby, with countless factors that determine a coin's worth, like scarcity, preservation, history, demand. Collectors sets out to break down those barriers. He says: "Every time our AI accurately identifies a card, we help educate and lower the barrier for a new collector. That openness brings people into the community and allows them to participate faster with more confidence."

The technology engine driving Collectors' change

Collectors' database can facilitate the instant identification of a card which sits on top of nearly 40 years of card

Tessell



CASE STUDY

Tessell's Quest to Transform Enterprise Data Management

Bala Kuchibhotla, Co-Founder and CEO of Tessell, explains how the database service company aims to 'tessellate' enterprise data across multiple clouds

Bala Kuchibhotla, Co-Founder and CEO of Tessell, has spent his career working in databases and data management. Starting out as a kernel engineer at Versant, competing with Oracle on object-oriented databases, he subsequently moved to Oracle's Enterprise Manager Division.

By the time Bala left Oracle, his entrepreneurial vision had crystallised. In the same way that Google's name has become synonymous with searching the web, Bala wants Tessell's brand to be inextricable from data optimisation. He explains: *"I feel my mission will be successful when someone asks, 'did you tessellate your enterprise data?'"*

The company name derives from tessellation, the mathematical concept of organising shapes efficiently. Bala draws inspiration from M.C. Escher's artwork, believing tessellation patterns offer a blueprint for enterprise data organisation. Tessell provides database-as-a-service solutions across Amazon Web Services, Microsoft Azure and Google Cloud Platform.

"Tessellation is a beautiful mix of science and art," Bala continues. *"If you can organise it beautifully and allow customers to operate it in the cloud, that solves a very interesting problem."* Recently, AI has added new dimensions to Tessell's mission. Bala sees opportunities to transform complex enterprise data operations into conversational interfaces, similar to ChatGPT's approach to human-computer interaction.

Building pragmatic bridges

Tessell's mission is more about pragmatism than revolutionary change. Bala knows that most enterprises have invested billions in their digital infrastructure, which makes wholesale changes impractical. *"My way of looking at modernisation is to bring rationality to this whole thing, and then try to form beautiful bridges,"* he says. The company's "lift and shine" philosophy helps customers transition gradually. However, unlike many cloud database services, Tessell operates entirely within customer cloud accounts, ensuring data never leaves their infrastructure.

elightful Management
AI Data Ops
IaaS
Exadata
Netapp

"The whole data and data infrastructure lives in the customer accounts," Bala says.

Cost-effective modernisation

Tessell has developed patented technology addressing cloud computing's high-performance storage costs.

Traditional providers charge premium rates for provisioned input and output operations per second, making mission-critical applications expensive. *"We have a patented technology which can allow customers to run their database infrastructures on a technology called NVMe,"* Bala reveals. This eliminates provisioned IOPS charges while delivering superior performance. Customers typically achieve 35-40% cost reduction alongside performance improvements.

"You get the most responsive systems with highest throughput, highest performance and the best cost," Bala says, calling it a win-win-win situation.

Tessell's partnership with Collectors Universe

Tessell's partnership with Collectors Universe, a collectibles authentication platform, exemplifies its collaborative approach.

> ***"I feel my mission will be successful when someone asks, 'Did you tessellate your enterprise data?"***
>
> Bala Kuchibhotla
> Co-Founder & CEO, Tessell

Bala and his team helped Collectors Universe to migrate their database systems from AWS services, delivering improved performance at a reduced cost. *"Our first deal was in December, but by April we had a deal three times the size,"* Bala explains. *"That shows their confidence in us."*

Looking ahead, Bala wants Tessell to be able to challenge even the biggest data services on the market.

"If people see us as a true challenger to AWS RDS, while having beautiful, highly-differentiated operational database services across all clouds, that's our first goal."

Learn more

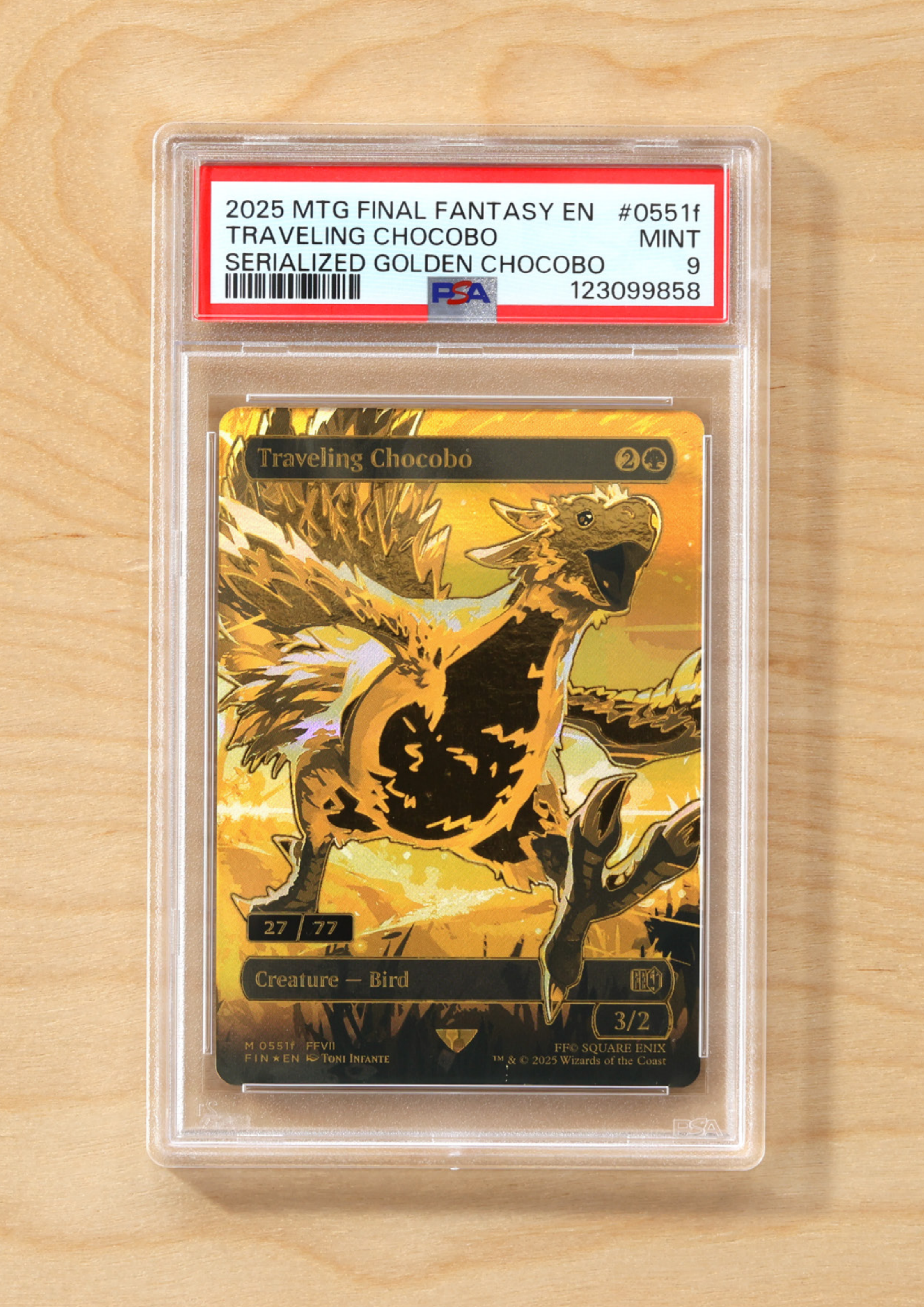
specifications and data – some of which stretches back to the dawn of trading cards back in the late 1800s. For decades, Collectors managed its operations with a technical footprint that is now seen as somewhat precarious. Servers were physically located in headquarters which, for a sector now valued at around US$400bn worldwide, is a setup Dan acknowledges as unsustainable.

The journey began with moving everything to AWS: “Step one was replatforming the entire infrastructure onto AWS to get elastic scale,” DVT adds. “Running on in-office servers is not something that most companies have done since the 90s and early 2000s, but it is a sign of how quickly businesses have scaled to keep up.

“We had to figure out how to make sure that if the power goes out that it doesn’t affect all of our customers worldwide.”

This cloud migration was more than a technology upgrade, but an existential shift. The result? Reliability, security and, crucially, the ability to iterate and improve quickly as new demands – from customers or collectors – surfaced. Alongside this, Collectors adopted AI-driven cloud ecosystems, particularly around automation, for its data architecture.

With millions of database records, the transition could have been overwhelming. However, by leveraging the power of database automation partner Tessell, Collectors has got “on top of the decades of data that we have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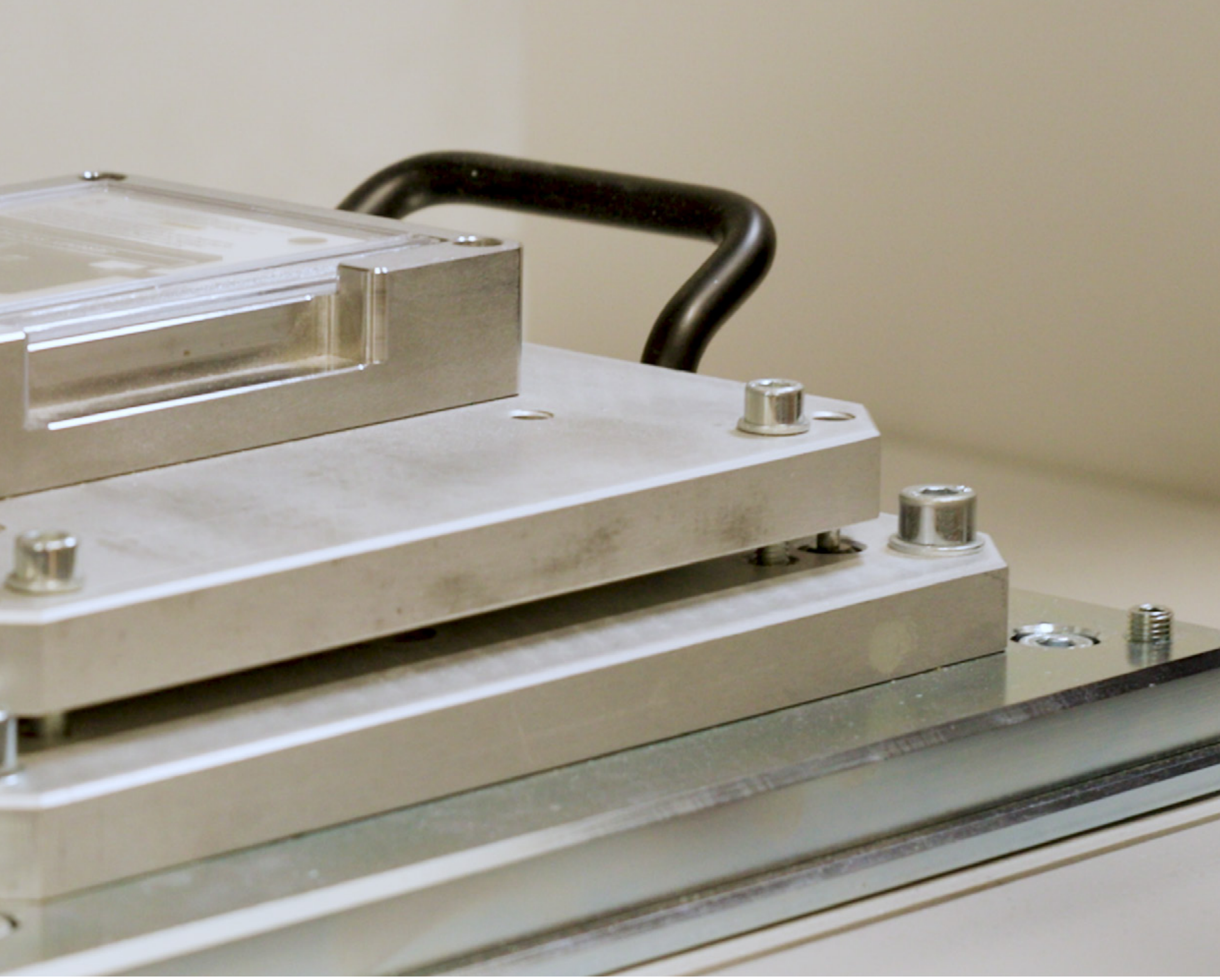
and continue to leverage it to serve our customers well," as DVT notes.

Tessell's ability to automate and streamline complex data management tasks that were once a key bottleneck or innovation and scale makes it, as DVT explains, like "air traffic control for your databases." The platform automates vital processes such as backups, failovers and hot patching, allowing Collectors to maintain the operational resilience needed to support millions of collectibles and their collectors worldwide.

By deploying Tessell, Collectors has reduced its database management costs by nearly 20%, freeing up significant resources to invest further in AI and ML research and development. The partnership has empowered Collectors' lean database team to match the capabilities of a much larger operation, benefiting from self-healing systems and rapid, anomaly-driven recovery.

DVT shares: "Tessell allowed us to take our three-person database administration team and give them the superpowers of a 30-person team, with the ability to add self-healing. This means that, if it detects an issue, it will determine what to do to fix it and try to fix it without having to involve a human. This helps us to grow quickly without having to spend in a linear or exponential



fashion, which allows us to then invest that into more customer facing features or to grow the team."

Tessell's automation has not only optimised costs but also accelerated the company's ability to adapt its offerings, serving collectors globally with greater speed, transparency and reliability. As Collectors continues to expand, this relationship underpins its ambition to lead the collectibles sector with state-of-the-art data-driven technology.

Reimagining the collector experience with AI

Despite the speed and efficiency benefits, Collectors' digital overhaul lso centres on rethinking what the collector experience could be. From DVT's perspective, the standout innovation to date is the PSA mobile app's AI-powered scanner.

"With the PSA app, you can snap a photo and it'll identify the card. From there, you can see live market data of that card in seconds from sites like eBay, with the app showing sales history and listings of that card in different conditions. We also make it easy for you, since you have the card in front of you, to submit it for grading. So what used to take minutes – if not hours – to do, you can now do in seconds just by taking a picture on your phone and adding it to your cart."

The PSA population report, which provides a record of all PSA graded cards in every condition in history and is nearing 100-million items graded, is a key part of the hobby that supplies key insights that help guide collecting and selling cards. To integrate the PSA population report at key grading and sales moments is an impressive feat in itself, but when you factor in the sheer size and scale of Collectors' operation, Collectors and DVT's team has to be celebrated.

DVT adds: "This ended up streamlining and building a much clearer workflow."

Despite Collectors' sheer volume of data posing challenges for DVT and his team, it has been a massive enabler of its AI-powered success. The AI technologies at play – deep learning, computer vision and metadata architectures, for example – all rely on more than 40 years of industry data.

"We use computer vision and our custom machine learning models to actually take those images to determine what subtle differences there are in order to know the exact card that it is and its potential worth," DVT notes. "We centralise all this information and make it so we can guide even the newest collector to be able to understand all of this and get this information immediately.

"Transparency really has been key in us growing this hobby and increasing the number of collectors that we see come through our doors as well as into the industry in general," he adds. "This is also because we're making collecting more accessible. It's no longer something you need to study for years to understand and

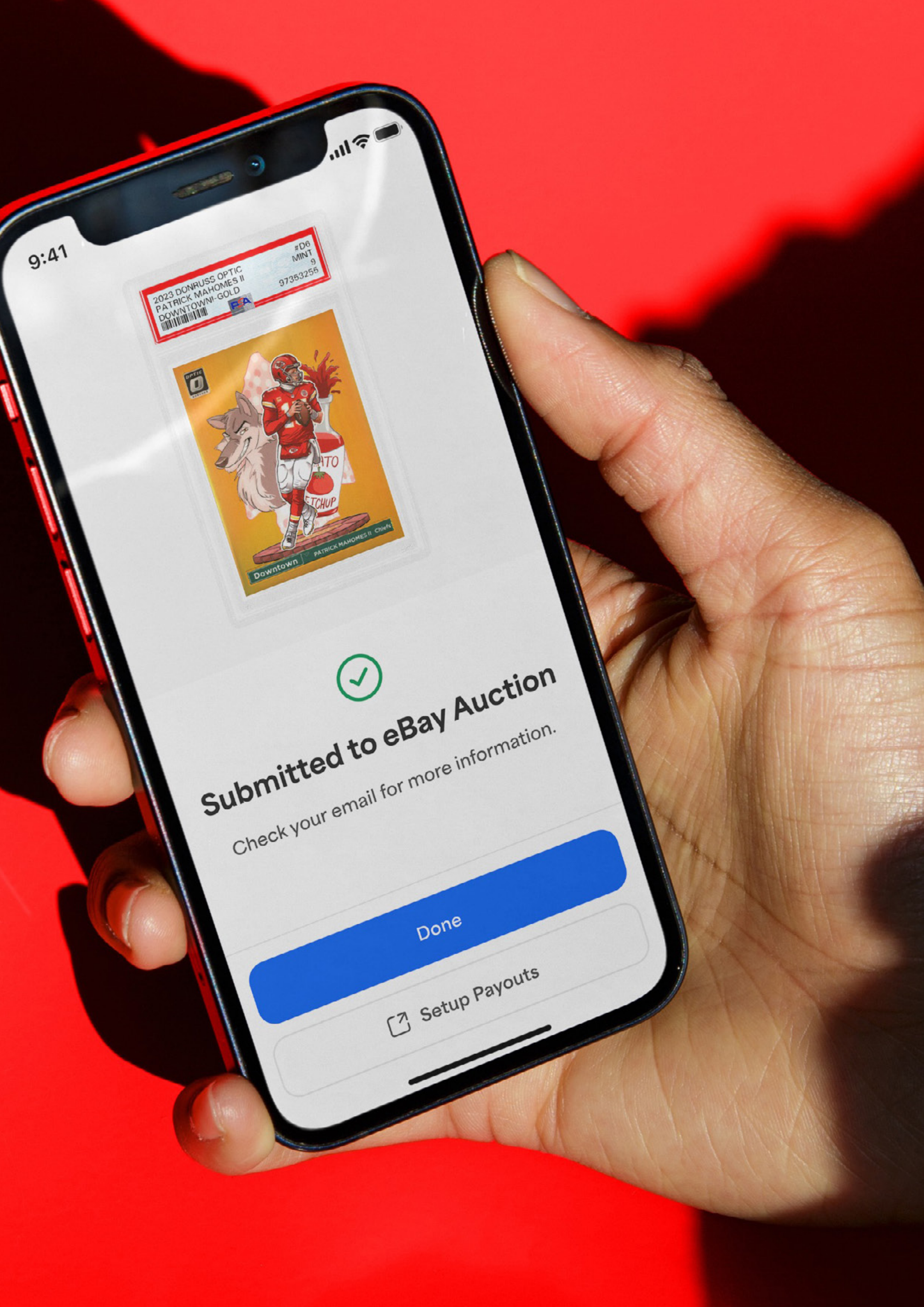
Collectors is responsible for more than

100

million items globally

79%

of collectors who use Collectors' scanner would recommend it to their friends



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Align your card within the frame above
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enjoy it. Now, anyone can go into a card shop, use our app, scan a few cards and feel like they have expert level details in their hands."

Every item is unique

The challenge of assigning value to collectibles is very different from mass-produced consumer products. With each item unique in provenance or condition, price can be hard to establish objectively – particularly at scale. This challenge is something DVT was keen to tackle head-on.

"The trick is actually not necessarily building that model itself," he says, "it's organising all of the metadata for the millions of collectibles that are being sold on a daily basis and merging it with ever-changing buyer expectations."

Taking this analysis on board, Collectors fuses deep learning imaging image models along with prediction models and market price graphs, meaning it gathers sales information across different marketplaces to try to develop a single price range for a specific item. As a result, Collectors saw coverage for trading card price estimates increase from 81% to 93% in less than six months, which DVT says empowers users to insure, trade and submit items for auction with newfound confidence.

"We developed this machine learning model for value estimation and started to refine it and take feedback to continue to grow and evolve," he shares. "It took a few years, but at this point the payoff is very tangible. Our last survey showed that 79% of collectors who use the scanner would recommend it to their friends – that includes the identification and the estimated value of that collectible. It just shows the level of confidence and trust that we've developed over the years."

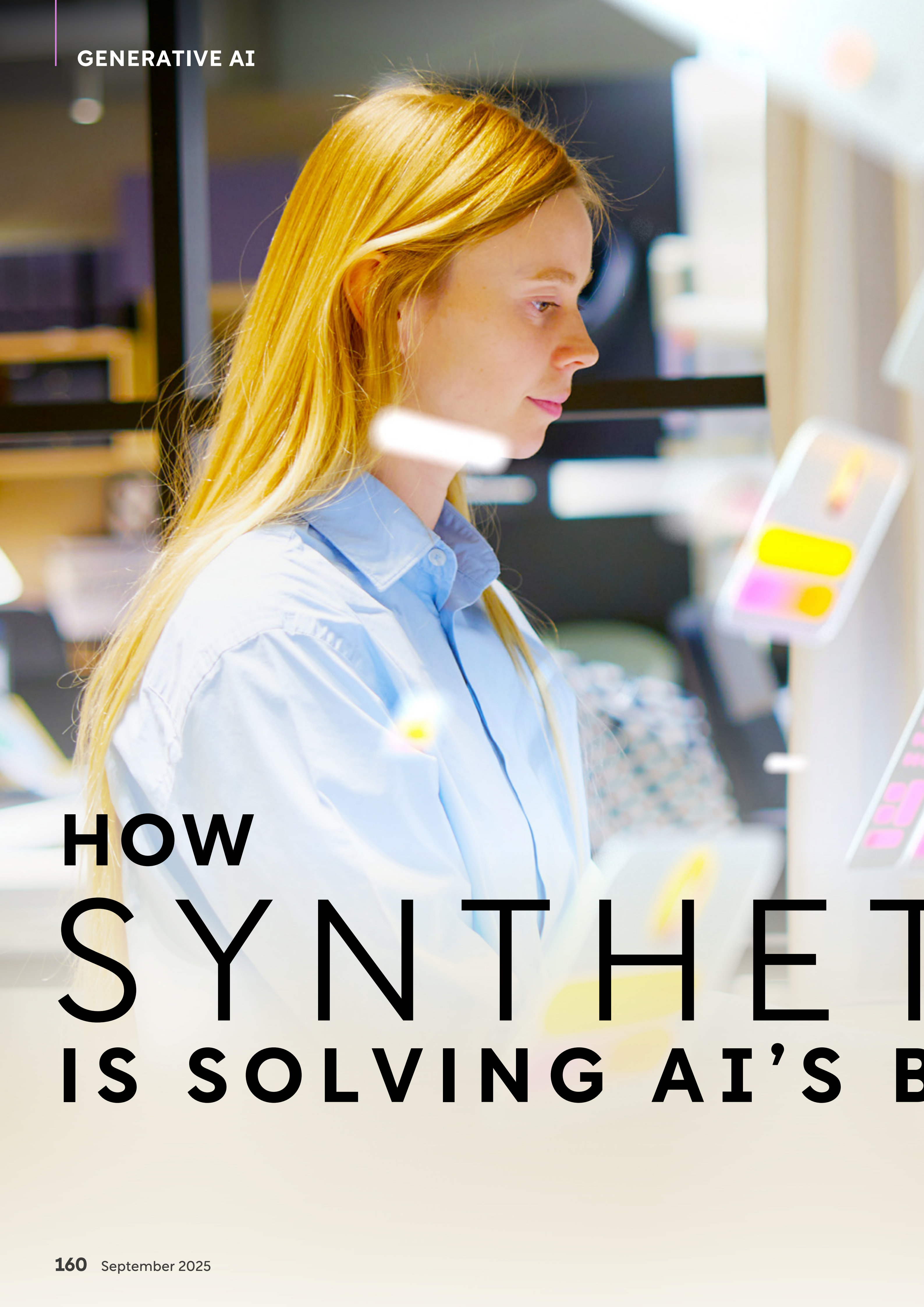
Trust is especially imperative in the collectables trade. Potential hiccups with product features and AI results could be dissected instantly on social media. This proximity to end users, he says, is both daunting and empowering.

"When we break that trust, they're very quick to let us know," Dan admits. But this risk comes with high reward. "Collectors range from middle schoolers all the way through to retirees – and all of them are weighing in on how well we did, which is great.

"We get real-time input from middle schoolers to retirees. It also shows the level of confidence that we've grown and the trust that we've developed over the years by building Collectors up with technology."

Collectors is working to continue this momentum, which shows no signs of slowing. Its future outlook comes in the form of a three-prong plan.

"One is global expansion, pushing into Canada, the EU and Asia-Pacific," he says. "The second is being multi-asset – bringing PSA level confidence to new categories. And the third is intelligence, rolling out more AI-driven features that put a collectibles expert in everyone's pocket." ○



HOW SYNTHET IS SOLVING AI'S B

TIC DATA

BIGGEST PROBLEM

As real-world data becomes scarce and privacy regulations tighten, AI companies are increasingly turning to synthetic data to train their models

WRITTEN BY: MARCUS LAW

AI has a data problem. As organisations race to deploy ever more sophisticated AI systems, they're running headlong into constraints that threaten to derail their ambitions: scarce high-quality datasets, stringent privacy regulations and the spiralling costs of data collection and curation.

The solution may lie not in finding more real-world data, but in manufacturing it entirely.

Synthetic data – artificially generated information that mimics real-world patterns without containing actual personal details – is rapidly becoming the industry's answer to these challenges. Gartner predicts that by 2024, 60% of data used for AI development will be synthetic, up from just 1% in 2021. By 2030, the analyst firm estimates synthetic data will completely overshadow real data in AI models.

"There's no good AI, there's no good generative AI, without good data," declared Iain Brown, Head of Data Science at SAS Northern Europe, during his keynote at Tech & AI LIVE. "It's foundational."

A crisis of quality and access

The data shortage isn't just about volume, but is about usability. Iain's team recently studied government data readiness across multiple departments and found that only 32% meets the standards required for AI development. This mirrors challenges across industries, where organisations discover that simply having data doesn't mean having useful data.

Consider the typical enterprise scenario: customer information scattered across CRM systems, transaction data locked in legacy databases, and operational metrics trapped in departmental silos. Each dataset tells part of the story, but regulatory barriers, technical incompatibilities and privacy concerns prevent organisations from creating the comprehensive view needed for effective AI training.

"Real-world data, the data we have access to in organisations… might not be good enough," Iain explained. "The quality of it, the veracity of it, the availability of it – given that it's all siloed in systems, it may have sensitive information in it."

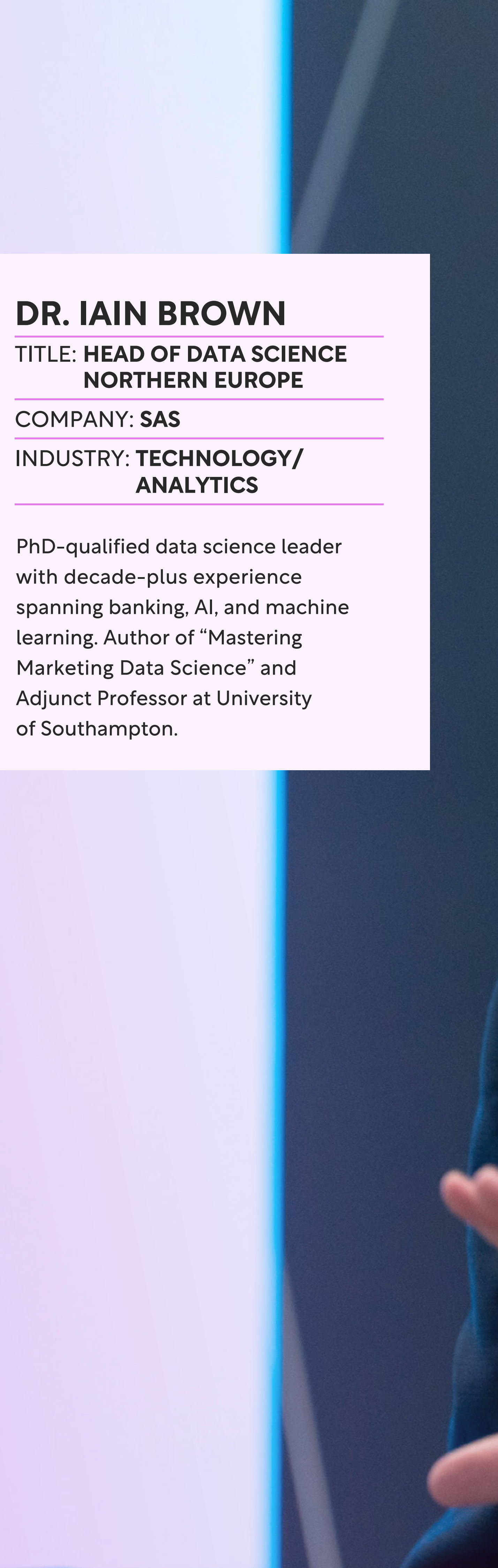
This data drought is particularly acute in regulated sectors. Healthcare providers sit on vast troves of patient information that could revolutionise medical AI – electronic health records, diagnostic images, treatment outcomes – but GDPR and similar regulations make sharing nearly impossible. A pharmaceutical company developing a rare disease treatment might have access to only dozens of patient records globally, far too few to train robust AI models. Financial institutions face similar constraints with customer data, whilst government agencies struggle to collaborate across departmental boundaries, even when working toward common goals.

The result is what researchers call 'data islands': isolated repositories of valuable information that remain largely untapped for AI development.

How synthetic data can improve AI performance

SAS's research provides compelling evidence that synthetic data can actually improve AI performance. Working with a major UK financial services provider on personal loan assessments, his team encountered a classic machine learning challenge: severe data imbalance.

The bank's historical data contained thousands of examples of customers who repaid their loans successfully, but relatively few examples of defaults. This imbalance is typical in financial services – most customers are good customers – but it creates a training problem. AI models become excellent at identifying



DR. IAIN BROWN

TITLE: **HEAD OF DATA SCIENCE NORTHERN EUROPE**

COMPANY: **SAS**

INDUSTRY: **TECHNOLOGY/ ANALYTICS**

PhD-qualified data science leader with decade-plus experience spanning banking, AI, and machine learning. Author of "Mastering Marketing Data Science" and Adjunct Professor at University of Southampton.

Dr. Iain Brown,
Head of Data Science
Northern Europe,
SAS

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low-risk applicants but struggle to spot the warning signs of potential defaults, precisely where accurate prediction matters most.

Using generative adversarial networks (GANs), Iain's team created synthetic examples of risky borrowers, balancing the dataset whilst preserving the statistical relationships that indicate credit risk. The approach relies on a sophisticated adversarial setup where two neural networks compete: a generator creates synthetic data whilst a discriminator attempts to distinguish real from artificial examples.

AMY JONES

TITLE: **PRINCIPAL**

COMPANY: **ERNST & YOUNG LLP**

INDUSTRY: **CONSULTING**

Leads EY's US Public Sector AI initiatives, helping government agencies navigate AI adoption and data strategy. Recently promoted to Partner in 2024, specialises in making data accessible and building scalable analytics ecosystems.

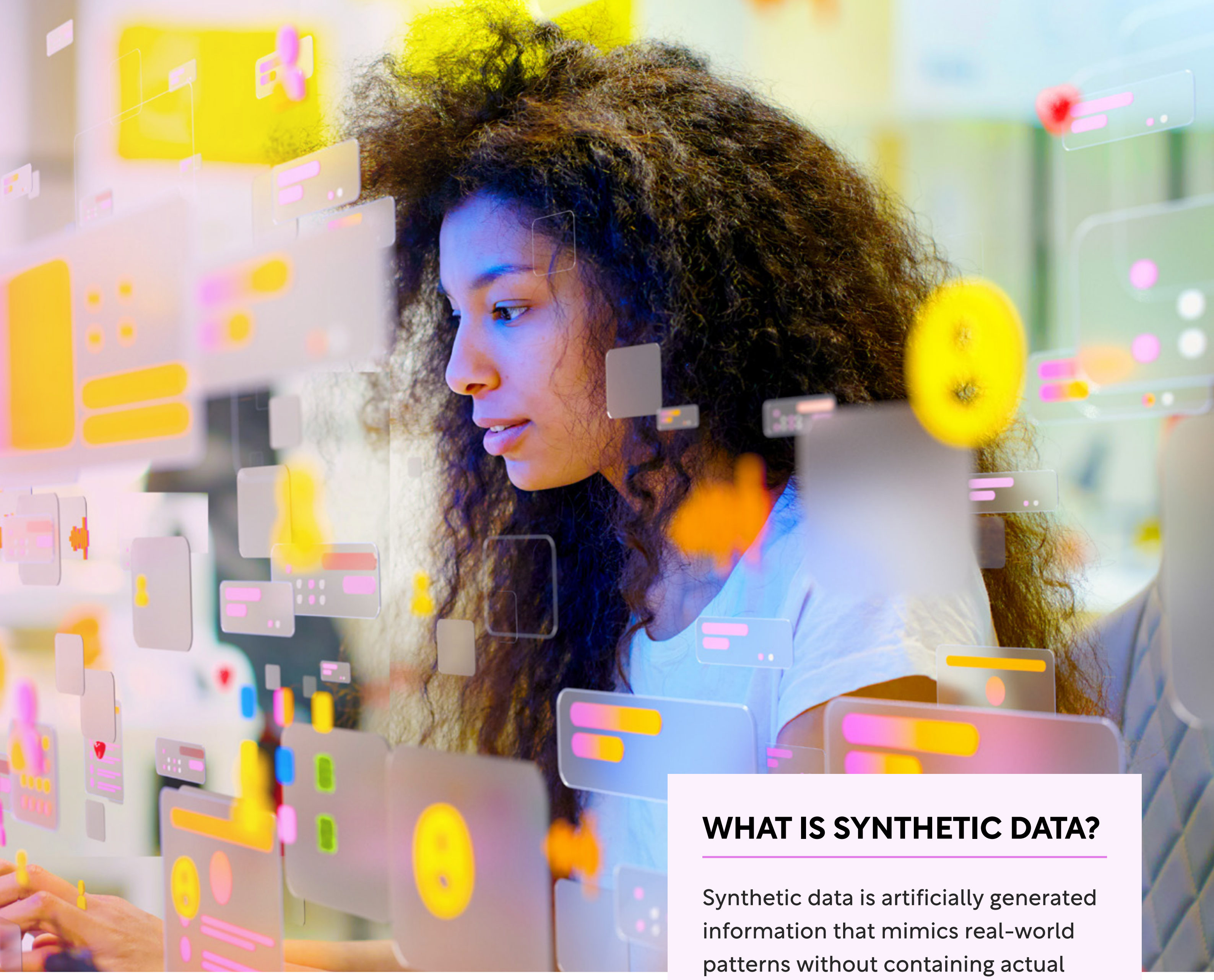
"The generative model never, ever sees real data," he explained. "However, the discriminator has seen some real data in the past... Eventually, over enough iterations, the generator, without seeing any real data, will actually start to create stuff that looks real."

Privacy by design

Synthetic data's privacy-preserving capabilities rest on mathematical foundations. Differential privacy adds controlled 'noise' to datasets, theoretically preventing synthetic data from being reverse-engineered to expose original information.

"The benefit of synthetic data in that guise means that you can start to create data that's privacy-preserving, it means it can be shared," Iain noted. "And more importantly, there's ways to then collaborate across not just internal systems but external."

But recent research reveals troubling gaps between theory and practice. An audit of a financial synthetic dataset – despite implementing differential privacy with supposedly conservative settings – uncovered actual customer names and sensitive financial details embedded in the synthetic data. The audit was completed overnight by two graduate students using only local



machines, raising questions about how much sensitive information a motivated attacker could extract.

These findings highlight a crucial gap: while differential privacy provides mathematical guarantees about information leakage, it doesn't account for the complex ways sensitive information can be reconstructed from seemingly anonymised synthetic datasets.

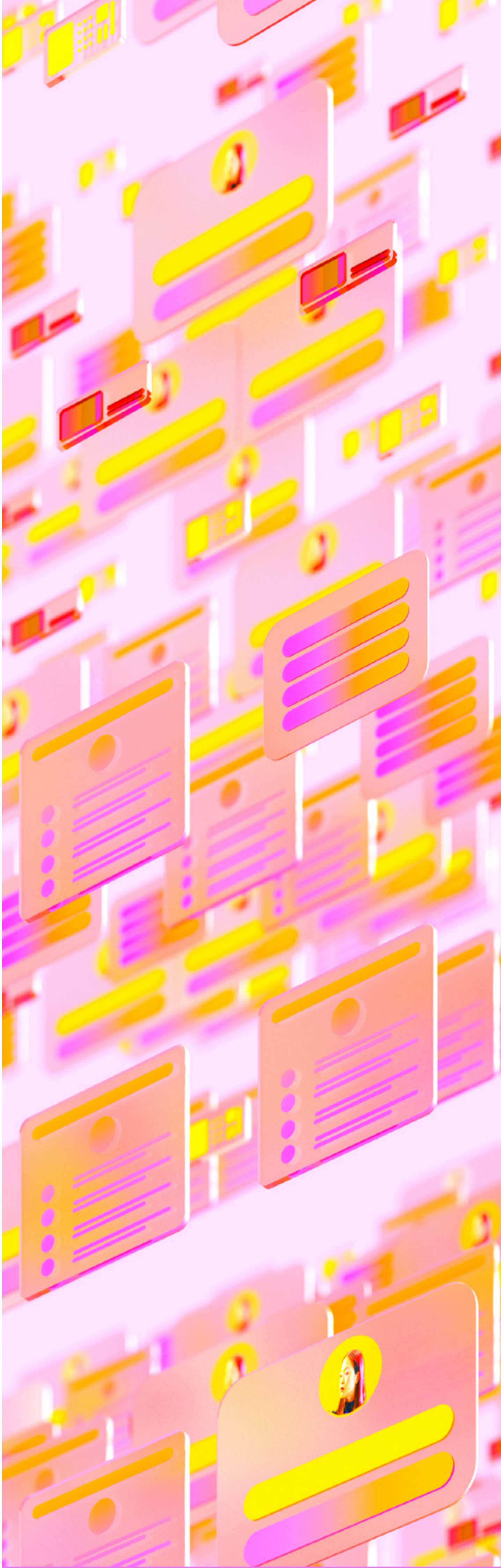
Amy Jones, Principal at Ernst & Young LLP, warns in a 2024 article that "the risk is compounded when synthetic data is indistinguishable from organic data, potentially leading to skewed insights and flawed decision-making.

WHAT IS SYNTHETIC DATA?

Synthetic data is artificially generated information that mimics real-world patterns without containing actual personal details. Created using advanced algorithms like generative adversarial networks (GANs), it preserves the statistical properties of original datasets whilst removing identifying information.

Unlike simply anonymising real data, synthetic data is entirely artificial – think of it as AI creating realistic but fake customer records, medical images or financial transactions. The technology addresses key challenges in AI development: data scarcity, privacy regulations and bias. Companies use it to train machine learning models, test systems and share insights without exposing sensitive information.

"The pervasiveness of generative AI has made it easier to generate vast amounts of content quickly," she says, "outpacing traditional measures to identify and manage source material."



The risk of synthetic data model collapse

Perhaps the most significant concern facing synthetic data is "model collapse": a phenomenon where AI models trained on synthetic data from previous generations gradually degrade until they produce nonsensical outputs.

The problem stems from a fundamental characteristic of AI systems: they excel at reproducing patterns they've seen but struggle with true creativity. When an AI model generates synthetic data, it tends to emphasise common patterns whilst losing subtle details and rare occurrences: what statisticians call the 'tails' of data distributions.

Research published in Nature demonstrated this effect dramatically. Researchers fine-tuned language models on Wikipedia articles, then used those models to generate synthetic text, which was fed back into training new models. After nine iterations of this process, the AI was producing pure gibberish instead of coherent text.

The study found that "indiscriminate use of model-generated content in training causes irreversible defects in the resulting models". As models train on their predecessors' outputs, they

SYNTHETIC DATA TRANSFORMS HEALTHCARE AI

Healthcare sits on a goldmine of AI training data – electronic health records, diagnostic images, genomic sequences – but GDPR and patient privacy laws keep most of it locked away.

Medical researchers developing AI for rare diseases face particular challenges, often working with fewer than 100 patient records globally. Synthetic data can generate thousands of statistically valid cases whilst preserving patient anonymity. NHS trusts are already piloting synthetic patient datasets to train diagnostic AI systems without compromising confidentiality.

However, the stakes in healthcare make synthetic data risks more acute. A 2024 study found that synthetic medical records could inadvertently encode treatment biases, potentially amplifying healthcare inequalities when deployed in clinical settings. Privacy concerns persist too – researchers demonstrated that synthetic genomic data could still be reverse-engineered to identify individuals.

Despite these challenges, healthcare AI companies are pressing ahead. Synthea, an open -source synthetic patient generator, has created over 2.7 million synthetic patient records, enabling research that would otherwise be impossible under current privacy frameworks.

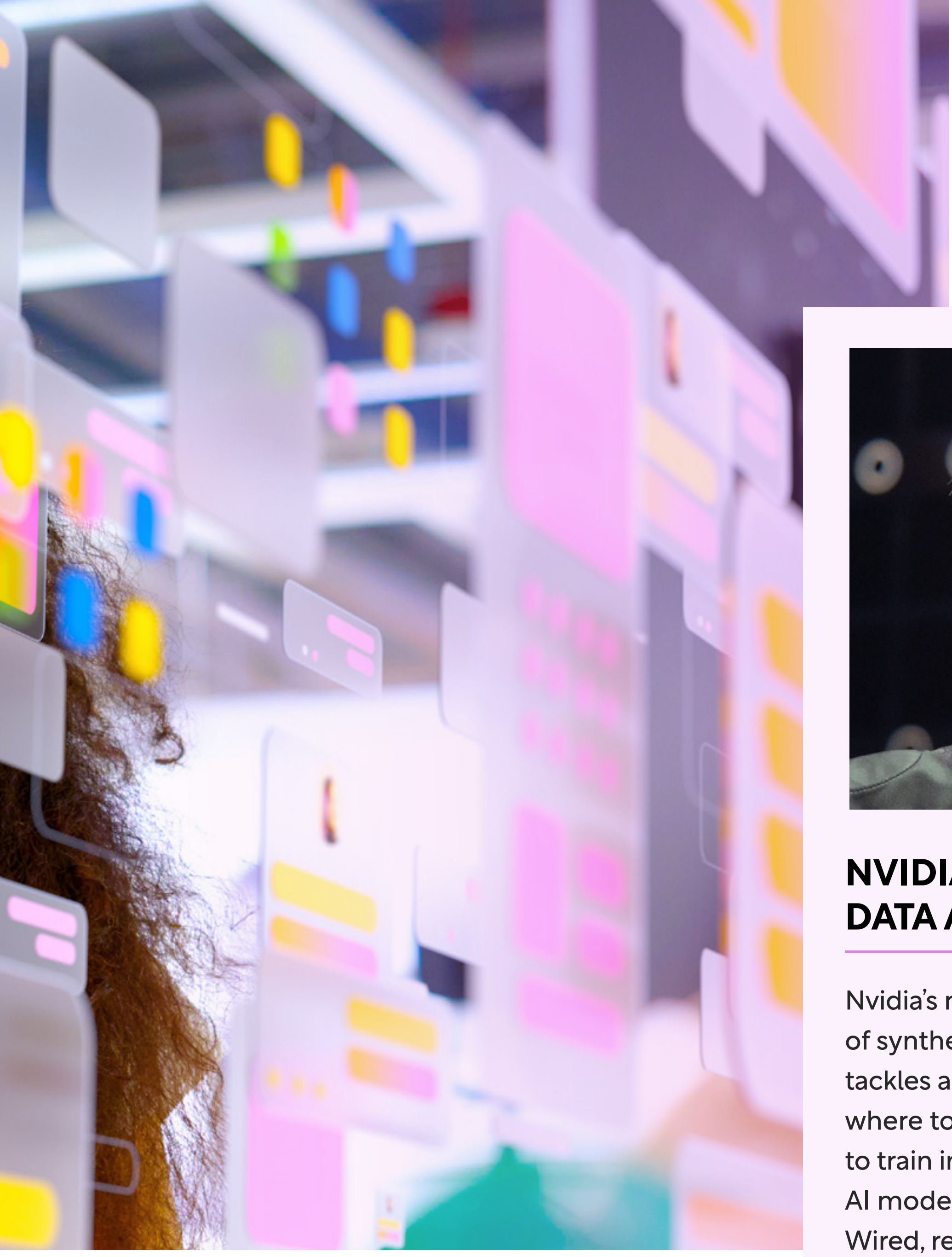
progressively lose information about uncommon but important patterns, eventually converging on a narrow, unrealistic representation of the original data.

This has profound implications for the future of AI development. As AI-generated content proliferates across the internet – some experts predict it could comprise the majority of online content within years – future AI models will inevitably encounter increasing amounts of synthetic information in their training data, potentially triggering widespread model collapse.

However, newer research suggests the problem may be less severe than initially feared. Julia Kempe from NYU's Center for Data Science and her collaborators, writing in a Medium article about their research, found that whilst "models trained on synthetic data eventually hit a performance plateau", the issue can be mitigated through careful data management.

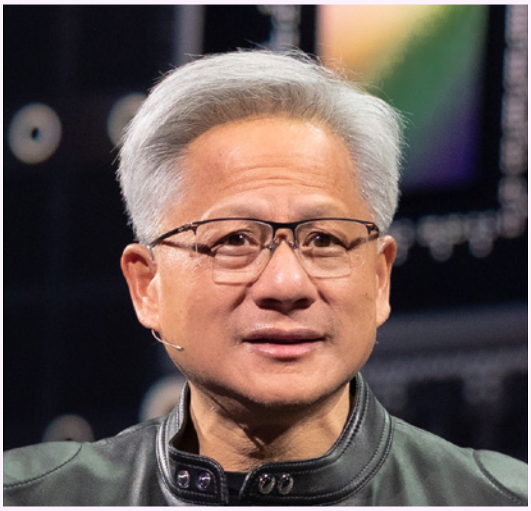
Can governance frameworks keep up?

As synthetic data adoption accelerates, governance frameworks are struggling



to keep pace with both technical capabilities and regulatory requirements. The EU's AI Act, which came into effect in 2024, includes provisions for synthetic data use but leaves many implementation details unclear. Similar regulatory uncertainty exists in other jurisdictions, creating compliance challenges for global organisations.

Iain emphasises that success requires building safeguards from the ground up: "If you build governance at the start – so from the data level – these AI systems that will inevitably

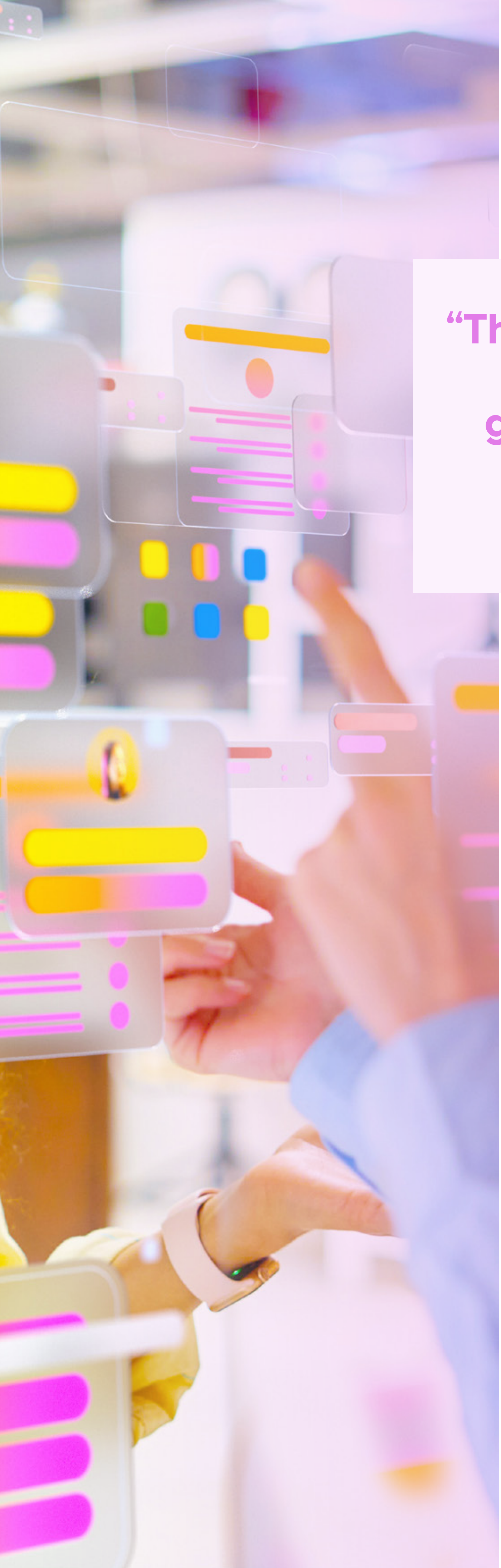


NVIDIA'S SYNTHETIC DATA ACQUISITION

Nvidia's nine-figure March acquisition of synthetic data specialist Gretel tackles a growing industry headache: where to find enough quality data to train increasingly sophisticated AI models. The deal, reported by Wired, reportedly surpassed Gretel's US$320m valuation.

The timing is no coincidence. Since ChatGPT sparked mainstream AI adoption in 2022, companies have struggled with data scarcity. Synthetic data promises unlimited training material without the privacy complications that concern healthcare, finance, and government sectors.

Speaking at this year's GTC conference, Jensen Huang framed the challenge clearly: "There are three problems that we focus on. One, how do you solve the data problem? How and where do you create the data necessary to train the AI?"



> “There’s no good AI, there’s no good generative AI without good data. It’s foundational”
>
> **Iain Brown,**
> Head of Data Science
> Northern Europe,
> SAS

be built on top of them are more likely to be trusted, more likely to be accepted by consumers.”

This governance challenge extends beyond technical considerations to fundamental questions about transparency, accountability and trust. Organisations must establish clear data lineage tracking where synthetic data originates and how it’s been modified, implement robust quality assurance processes that validate synthetic data’s statistical properties, and maintain transparency about synthetic data usage in AI systems that affect real-world decisions.

The stakes are considerable, particularly as synthetic data becomes embedded in critical systems affecting healthcare, finance and public safety. As Iain concludes: “No matter how advanced a model is, the data quality is still fundamental to getting good, accurate AI systems. Synthetic data helps improve the balance. It improves the diversity and the completeness of data.” ○

GAW CAPITAL

SINAR PRIMERA

GOLDEN DIGITAL GATEWAY

BATAM'S DATA CENTRE POTENTIAL

WRITTEN BY:
MARCUS LAW

PRODUCED BY:
LEWIS VAUGHAN

Gaw Capital & Sinar Primera combine global expertise with local knowledge to deliver first facility in Batam and target Southeast Asian expansion

The Southeast Asian data centre market faces a capacity problem. Singapore, the region's dominant hub, closed its doors to new developments in 2021 due to power constraints, forcing hyperscalers and enterprises to find alternatives quickly.

This challenge has created opportunities for operators willing to invest in less proven locations. Asia-based Gaw Capital Partners and Jakarta's Sinar Primera have placed their bet on Batam, a small Indonesian island 30 minutes by ferry from Singapore, where they launched the Golden Digital Gateway facility in February 2025 as the first operational data centre in the Nongsa Digital Park.

Singapore's data centre market generates US$1.4bn in annual revenue from a population of just five million, demonstrating the revenue density that makes proximity to the city-state valuable. The moratorium, implemented to address electricity grid constraints, has redirected investment flows across Southeast Asia as customers seek alternative locations that can deliver similar connectivity and latency performance.

"It's a fantastic joint venture that brings together two partners and allows the various parties to complement each other in terms of skills," says Nicholas Toh, Managing Director – Head of Data Centre Platform, Asia (Ex-China) at Gaw Capital Partners. "Gaw Capital has a deep history and experience in designing, building, owning and operating data centres.

"Within Gaw Capital's data centre portfolio, we have assets in Kuala Lumpur, Malaysia, Tokyo, Japan, Seoul, Korea and Ho Chi Minh, Vietnam with investments in Chinese operators Centrin and Jinke that serve Chinese hyperscalers."

Sinar Primera, meanwhile, provides local market knowledge essential for navigating Indonesia's business environment.

Kah Jin Hong, Head of Sinar Primera Group, explains how his firm's entry into data centres was a strategic response to accelerating market conditions. "About three to four years ago, the market was really heating up in Indonesia, and we were looking for partners to reach out to, as it's not an easy space to enter," he says. "We came across Gaw Capital and it was a good partnership. We're able to bring different things to the platform."

> "Data centre rack density has increased almost tenfold in a matter of two or three years. It's just going so rapidly"
>
> **Kah Jin Hong,**
> Head of Sinar Primera Group,
> **Sinar Primera**

KAH JIN HONG

HEAD OF SINAR PRIMERA GROUP

Currently, Kah Jin Hong serves as the leader of Sinar Primera Group and is a seasoned real estate expert with over 25 years of experience. His expertise spans mergers and acquisitions (M&A), financing, real estate investment funds (REITs), and asset management across various sectors, including industrial estates, residential, retail, hospitality, and data centres.

Kah Jin Hong previously worked at Lippo Group, overseeing a 3,000-hectare industrial estate and leading the divestment of assets into two Lippo REITs in Singapore. Prior to that, he played a key role in Keppel Land's expansion and development in Vietnam and the establishment of Ascott Residence Trust during his time at CapitaLand.

Singapore moratorium creates Batam opportunity

Singapore's position as a regional hub stems from decades of infrastructure investment. The city-state hosts 27 submarine cables connecting to international networks: the largest submarine cable hub in the Asia-Pacific region. Power consumption from data centres reached levels that prompted government concern about grid stability, leading to the 2021 moratorium while authorities evaluated infrastructure capacity.

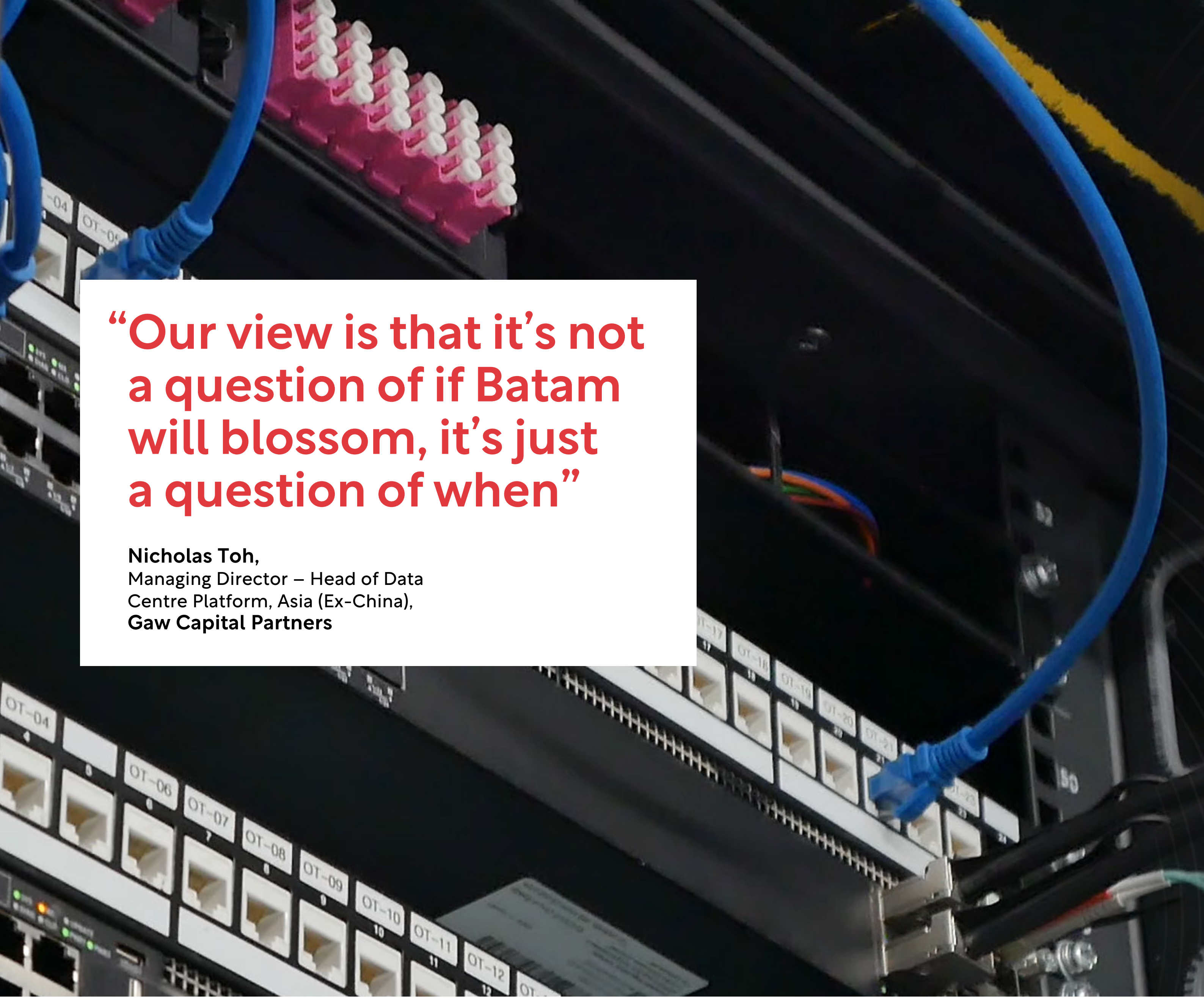
This forced customers who previously would have deployed exclusively in Singapore to evaluate alternatives.

Malaysia's Cyberjaya and Johor regions have attracted significant investment, along with Thailand, the Philippines and Vietnam.

Batam offers advantages that distinguish it from other alternatives, though. The island sits approximately 20 kilometres south of Singapore with established ferry connections. More importantly, its Special Economic Zone designation provides tax advantages including zero import duties, value-added tax exemptions and reduced corporate tax rates.

"Our view is that it's not a question of if Batam will blossom, it's a question of when," Nicholas says. "As a data centre customer today, it's very difficult to get capacity in Singapore, which is why customers will start to look at options beyond."

Batam's submarine cable infrastructure includes 12 cables with direct links to Singapore, enabling sub-2 millisecond latency connections. "We think Batam is very strategic, given it's got 12 submarine cables of its own, directly connecting with Singapore, and can offer less than 2ms of latency," says Nicholas. "Customers could potentially come here to Batam and then leverage that location and the strategic position of Singapore as one of the key data centre hubs in APAC."



> **“Our view is that it’s not a question of if Batam will blossom, it’s just a question of when”**
>
> **Nicholas Toh,**
> Managing Director – Head of Data Centre Platform, Asia (Ex-China),
> **Gaw Capital Partners**

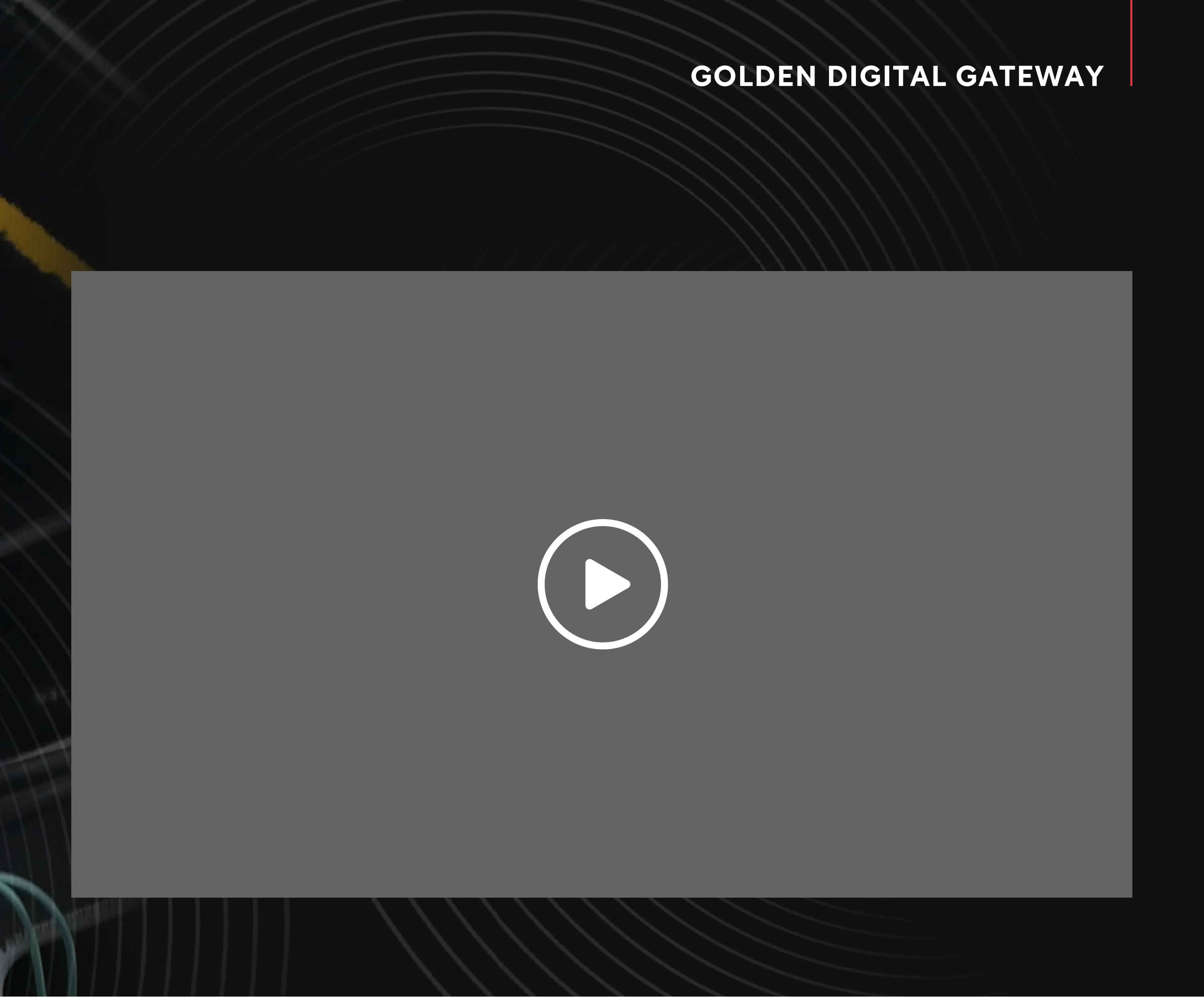
Golden Digital Gateway construction addresses logistics challenges

Data centre construction in established markets benefits from mature contractor ecosystems and established supply chains. Batam, therefore, presented logistical challenges that required adapting construction approaches to an island environment with limited local expertise.

Indonesia’s data centre construction capabilities are concentrated in Jakarta, leaving Batam without established contractors familiar with modern facility requirements. Kah Jin describes this as the project’s most significant challenge.

“One of the challenges for us in Batam was that while it’s near Singapore, a lot of the construction expertise is in Jakarta,” he says. “One of the main issues was to find the right construction partners to work with that would be able to execute [the project] on the island.”

The solution required convincing Jakarta-based contractors to establish temporary operations in Batam. The nine-month timeline from groundbreaking to operational status required careful coordination while maintaining construction schedules that would enable first-mover advantages.



"We managed to deliver the facility within nine months from the point we went in, which was in May, and we commenced operations in February," says Kah Jin. "That was pretty fast, and that's why we were able to complete this and open up as the first data centre to open in Batam at that point in time."

The first-to-market advantage provided early access to power allocations and established relationships with local infrastructure providers. Multiple operators have since announced developments in Nongsa Digital Park, validating the location while increasing competition.

Site conditions added complexity to the project. The park required extensive land preparation and infrastructure development. Nicholas describes the transformation: "When that project first started, as I understood, it was literally just forest land. All of that has now been cleared for a number of other data centre operators that are all within the Nongsa Digital Park."

Eaton partnership delivers integrated power solutions

Data centre power systems represent one of the most critical infrastructure components, where failures can cause

Digital transformation and energy management in the wake of AI

Five trends that will most impact data centre operations in 2025

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DATA CENTRES
AS A GRID

Adjust to meet exploding capacity demands

40% of data centre operators say they are chellenged to meet growing infrastructure demands, with **28%** specifically citing the need to understand and deploy capacity for AI workloads

Use AI to optimize data centre operations

38% use or plan to use an energy power management platform (ie. BMS, EPMS, DCIM) to manage their data centre operations, among this group many believe AI and machine learning will help them better monitor data centre equipment (55%), network/IT systems (46%) and power/ cooling equipment (45%)

Improve sustainability and energy efficiency

41% plan to increase their use of renewable energy sources

Plan for edge and decentralisation

22% plan to devise/deploy edge data centers and strategy

Ensure data security and compliance

56% cite managing concerns, such as cyberattacks or data theft, as their top challenge

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NICHOLAS TOH

MANAGING DIRECTOR – HEAD OF DATA CENTRE PLATFORM

GAW CAPITAL

Nicholas Toh is Managing Director & Head of Data Centres for Gaw Capital. Nicholas has over 20 years of global investment experience in the data centre, finance and real estate industries and has been in the data centre industry for the last 15 years, based in Singapore. Most recently Nicholas was GM, Asia at Edgnex Data Centres and Group CEO at DCI Data Centers.

Nicholas was previously CEO, Northeast Asia for STT GDC and was instrumental in the growth of the business having been a founding member since its inception in 2014.

Prior to joining STT GDC, Nicholas at Securus Data Property Fund, now listed as Keppel DC REIT.

customer service breaches and potential data loss. Traditional construction involves assembling power components from multiple manufacturers on-site, creating risk where incompatibilities can cause commissioning delays.

The partnership with Eaton addressed this through factory-integrated power train units that combine uninterruptible power supplies (UPSs), switching gear and distribution equipment in pre-tested configurations.

“Everyone knows Eaton is a household name in this business. We worked with them on the power train units here,” says Kah Jin. “The beauty is that they were able to provide us with an end-to-end solution. With new data centres, a lot of testing is done on-site. But now, we work with Eaton on these power

Golden Digital Gate
GRAND OPEN
20

> “Data centres are actually being built next to where the power is because power is such an important consideration”
>
> **Nicholas Toh,**
> Managing Director – Head of Data Centre Platform, Asia (Ex-China),
> **Gaw Capital Partners**

train units, where the UPS and all the different components are connected.”

Factory testing eliminates uncertainty about system functionality during commissioning. “This ensures that everything works coming out of the factory, which reduces a lot of our construction risk. If things don’t work and can’t be commissioned on-site, there’ll be a major issue with our timeline,” says Kah Jin.

Beyond power systems, the facility’s connectivity strategy required partnerships with multiple fibre providers. Kah Jin describes these

as essential: "We work with different fibre connectivity providers into our site. We have an understanding with SPTel, which is a local provider that provides fibre connectivity from Batam right to Singapore via the government gas pipeline link between Indonesia and Singapore. We also work with different partners as well, like SEAX and Moratel."

Sustainability features target certification standards

Environmental considerations have evolved beyond energy efficiency to encompass water consumption, construction waste and carbon footprint. Golden Digital Gateway targets Building and Construction Authority Green Mark certification from Singapore's green building programme.

"At Gaw Capital, whenever we've designed our data centres, sustainability is extremely important, and we try to embed it into every phase of the DC design, construction and operations," Nicholas outlines. "Specifically at Golden Digital Gateway, during construction, we used recycled materials and repurposed some of the excavation waste into the landscaping."

Taking a modular approach to data centre construction has helped reduce on-site waste through factory-controlled manufacturing. "We made sure that we constructed the building on a very modular basis," Kah Jin describes. "A lot of the things we built were tested in the factory before we shipped them out. For our project, we were able to achieve BCA Green Mark certification."

The facility's cooling design prioritises air cooling over water-intensive systems. "What's unique about our facility in its first phase is that we are air-cooled, so we have less reliance on water, which is becoming more of a scarce resource," says Kah Jin.

What's more, the infrastructure incorporates flexibility for future requirements as AI workloads may require liquid cooling systems. "We've tried to ensure the design we've come up with is as future-proof as possible," says Nicholas. "We've got quite a lot of flexibility in tweaking the design

BATAM vs SINGAPORE: THE NUMBERS

Singapore data centre market: **$1.4bn** annual revenue from **5 million** population

Singapore submarine cables: **27** international connections

Batam submarine cables: **12 direct links** to Singapore

Latency Batam to Singapore: **Sub-2 milliseconds**

Construction timeline: **9 months** from groundbreaking to operations

Phase 2 capacity: **20MW** additional power

Batam Special Economic Zone (SEZ) offers corporate tax efficiency through **0%** import tax, **12%** VAT exemption, up to **100%** corporate tax holiday for a maximum **20 years,** and **22%** tax allowance, delivering higher savings than nearby SEZs

in the future to effectively account for changes that are potentially coming in terms of high-density racks and the liquid cooling that is potentially required for AI workloads."

How AI is driving infrastructure evolution

The rapid adoption of AI applications has transformed data centre infrastructure requirements. GPUs designed for AI training consume substantially more power than conventional server processors – generating heat that requires enhanced cooling systems.

Hardware evolution cycles have accelerated from traditional three-to-five-year refresh patterns to annual upgrades. Kah Jin describes the challenge: “That’s always a challenge with this business. Every year, Nvidia’s Jensen Huang is up there on stage, one-upping himself and coming up with a new chip, and every chip increases the number of kilowatts it needs. Data centre rack density has increased almost tenfold in a matter of two or three years.

“That’s why building something quick and on time is key. Getting up the core and shell is really important because the mechanical and electrical elements just constantly change,” says Kah Jin.

AI infrastructure requirements are reshaping site selection criteria globally. Nicholas describes how power requirements are influencing location decisions: “With what’s happening with AI, especially across Europe and the US at the moment, data centres are actually being built next to where the power is because power is such an important consideration. It’s rewriting the rule books.”

Nicholas expects older facilities to serve applications that don’t require the latest hardware rather than becoming

obsolete. "The analogy I have is akin to iPhones. I've got an iPhone 15; my daughter has an iPhone 10 from five years ago. That doesn't mean the iPhone 10 can't do the same things," he says. "The analogy I would take to data centres is that as long as they are properly maintained, there will be different use cases for the older data centres in the future."

Batam Phase 2 expansion targets Jakarta industrial park development

The partnership's immediate focus centres on the 20MW Phase 2 development on adjacent land within Nongsa Digital Park. This expansion will more than double the facility's capacity while establishing the joint venture as a major operator in Indonesia's emerging data centre market.

"Our immediate priority is to develop Phase 2, which is the adjacent parcel of land," says Nicholas. "That's 20 megawatts in addition to what we have there already."

Beyond Batam, longer-term expansion plans target Jakarta, where Indonesia's data centre market is most developed and where Sinar Primera maintains strategic land holdings. The capital offers established power infrastructure, water availability and proximity to the country's largest enterprise market.

"We've got more sites available in Jakarta. That's the other hub where most of Indonesia's data centre build-out is," says Kah Jin. "We definitely hope to expand and leverage that. Jakarta has a lot of power, we've got land and we've got water, so that's a potent combination."

The Jakarta strategy extends beyond individual facility development to creating purpose-built data centre industrial parks that could provide economies of scale and attract multiple operators to shared locations.

"We are developers doing our own industrial park, and we hope to build a data centre industrial park that will cater more to data centres, akin to what you see elsewhere," says Kah Jin. "We hope to replicate that model in Jakarta and definitely hope to grow with Gaw Capital to build more and meet more of our customers' needs."

The partnership model that enabled success in Batam could be replicated across Indonesia's fragmented market, where local expertise remains essential for navigating regulatory requirements and establishing operational relationships.

"From our perspective at Gaw Capital, we're very excited about the partnership, and we think that there's a lot that we can do together in Indonesia," says Nicholas.

HOW **LENOVO** HYPER-PER AI WORK

Lenovo VP Rakshit Ghura on how the company is helping enterprises build AI-powered digital workplaces with personalised employee experiences

WRITTEN BY: MARCUS LAW

D IS BUILDING
SONALISED
KPLACES

RAKSHIT GHURA

TITLE: **VP AND GENERAL MANAGER OF DIGITAL WORKPLACE SOLUTIONS**

COMPANY: **LENOVO**

Rakshit has a pivotal role driving innovation and transformation at Lenovo and upholding a "steadfast dedication to client delight". He looks after product strategy, orchestrating services spanning from Advisory to Productivity to Connectivity to Cybersecurity Solutions.

Lenovo's approach to AI workplace transformation is focused on a fundamental insight: employees, even those performing identical roles, often have vastly different working preferences and communication styles. While many parts of the industry push standardised AI solutions, Lenovo's Solutions and Services Group (SSG) is building digital workplace environments that adapt to individual users rather than forcing users to adapt to technology.

Rakshit Ghura, Vice President and General Manager for Lenovo's Digital Workplace Solutions business unit, leads this transformation strategy. With 21 years in the industry, Rakshit oversees Lenovo's efforts to help organisations move from reactive IT support models to AI-enabled workplace environments that deliver measurable business outcomes through hyper-personalised employee experiences.

"The focus of digital workplace solutions is to help create a workplace environment for organisations where we help them move from reactive and traditional ways of working to something which is more future-oriented, taking advantage of the best of the technologies around AI and all the automation capabilities," Rakshit says. This future-focused approach directly addresses the productivity challenges enterprises face while positioning technology as an enabler of human potential rather than a replacement for human judgment.

Lenovo's comprehensive technology portfolio spans from pocket to cloud, enabling the company to deliver integrated solutions that combine hardware, software and services. This end-to-end capability becomes the foundation for subscription-based models that transform how enterprises consume and deploy AI workplace technologies.

The path from consumer to enterprise technology adoption follows established patterns. "From my experience, any innovation on the digital workplace side actually starts from the consumer side," Rakshit observes. "Whether you take any technology – be it ChatGPT, or you go a couple of years back, you take applications, you take Uber – all of these started as B2C technologies."

Lenovo monitors these trends to identify enterprise opportunities. "Wherever we see an opportunity that there is a consumer trend, there is an opportunity for an organisation to take advantage of it, we translate those consumer trends into an enterprise-grade solution, make it secure, make it palatable for our end customer."

> **"From my experience, any innovation on the digital workplace side actually starts from the consumer side"**
>
> **Rakshit Ghura,**
> VP and General
> Manager of Digital
> Workplace Solutions,
> **Lenovo**

97%

of organisations recognise they must transform their workplaces

Source: Lenovo Work Reborn Research Series 2025

Lenovo TruScale Device as a Service (DaaS) transforms enterprise IT consumption

Lenovo TruScale DaaS represents a shift in how enterprises consume IT resources. The solution combines hardware, software, sustainability, security and support services into a subscription-based model.

"It's a truly transformative solution," Rakshit states. "We are able to offer comprehensive devices, solutions, services and software for the particular business persona of an organisation."

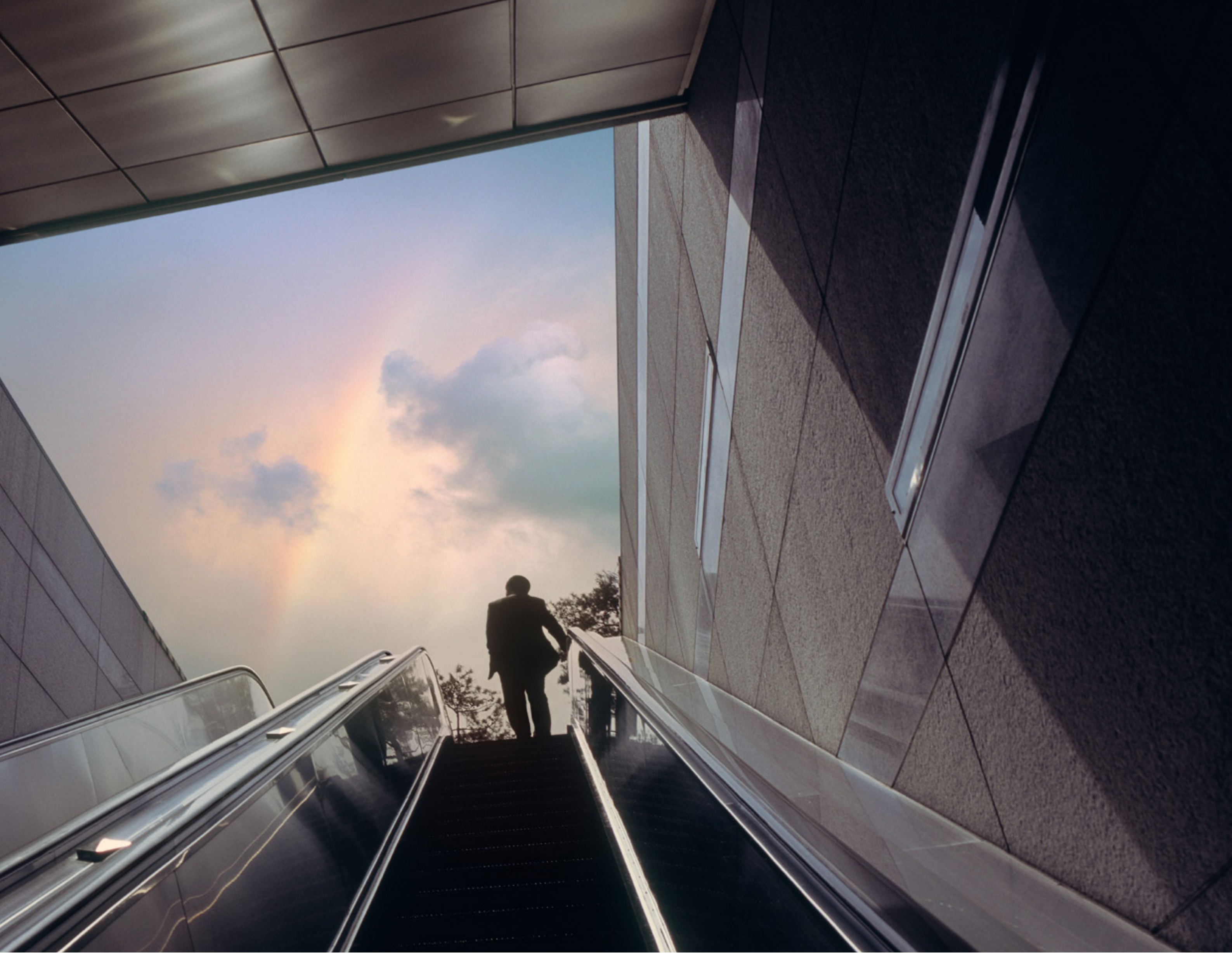
Lenovo TruScale DaaS solution provides organisations with flexible subscription-based device lifecycle management, security and sustainability. "It makes managing devices simple – streamlining procurement and deployment, empowering productivity and enabling secure, more responsible device refurbishment and retirement," Rakshit explains.

"This means organisations can empower employees with next-gen devices and better experiences quickly and easily – while maximising ROI across the board."

Three key benefits drive Gen AI workplace implementation

Lenovo identifies three primary benefits organisations can achieve through Gen AI implementation, based on research involving 600 global IT leaders.

Hyper-personalisation leads the transformation. This concept recognises that employees performing identical roles may have different working preferences. "Just imagine two people with the same role – they have their own preference to do the same job," Rakshit illustrates.



"We may all be doing the same tasks, but the fact is, we are two different individuals. We have our own different ways to approach the same problem."

"Hyper-personalisation is all about understanding the unique needs of the user, understanding their preferences, understanding how they operate on a day-to-day basis," Rakshit explains. "Are you more a text-oriented person, or do you prefer chatting with your colleague, or do you prefer picking up the phone and calling the other person?"

Lenovo's AI-driven platform, Care of One™, puts this philosophy into practice through persona-based device selection. "By giving each employee the exact equipment and support they need for their role, they can work without disruption and at their best – generating greater ROI for your device fleet," Rakshit notes. "Together with predictive and proactive issue resolution and near zero-touch IT support, Care of One™ helps create a seamless, hyper-personalised and high-performing experience."

Productivity enhancement follows as the second benefit, encompassing both automation and digital twin capabilities. "With the help of Gen AI, organisations can automate repetitive tasks, they can create new content, they can help in decision-making," Rakshit explains. "That is one critical benefit where you can do a lot of cost reduction with the help of Gen AI."

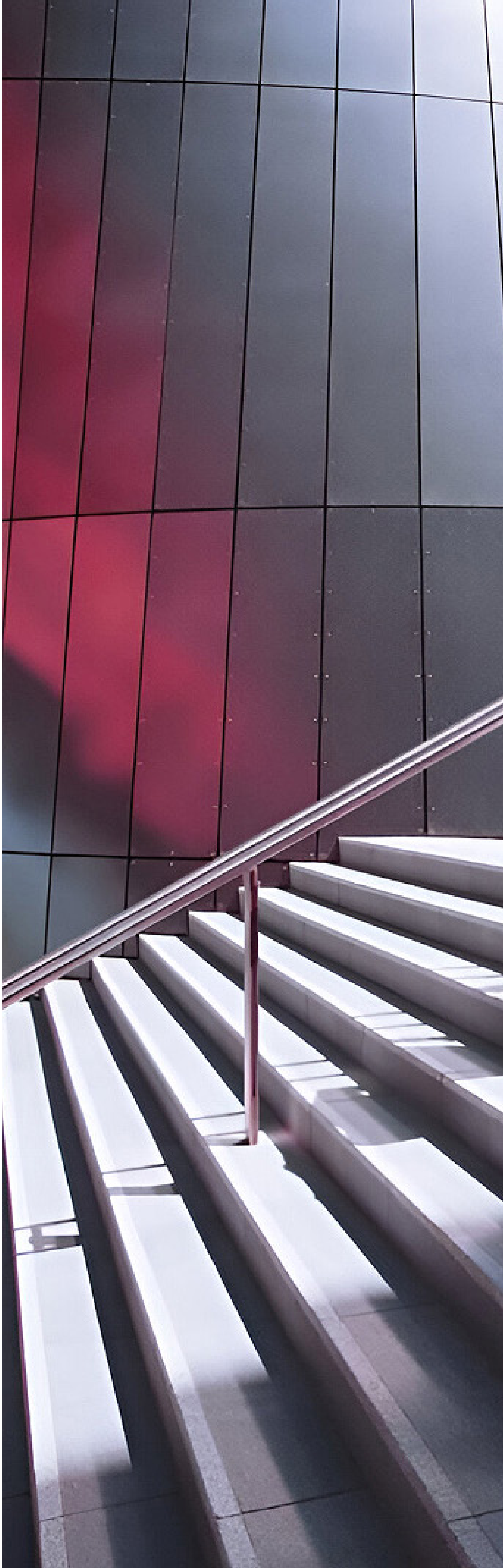
This productivity enhancement extends to creating empowered workplaces through digital twins. “Creating a digital twin in an organisation where most of the mundane work is done by your digital twin, and the technology is actually helping you to focus on the value-adding work, something which is more thinking-led, something which is more creative,” Rakshit describes. By offloading routine tasks to AI-powered digital counterparts, employees can redirect their energy toward strategic initiatives that drive genuine business value.

The third benefit sees innovation cycles accelerated. “With the help of Gen AI, we can actually quicken the decision-making, we can see how we can gain that competitive edge which enterprises are looking for,” Rakshit says. This acceleration manifests in multiple ways: AI can rapidly analyse market trends and customer feedback to inform product development, simulate countless scenarios to optimise business strategies and generate creative solutions that human teams might not have considered.

“Gen AI doesn’t just speed up existing processes – it opens entirely new pathways for innovation by connecting disparate data points and revealing opportunities that were previously invisible,” Rakshit explains.

Barriers and misconceptions prevent effective AI adoption

Lenovo’s Work Reborn Research Series 2025 identified significant barriers preventing effective digital transformation.



The research reveals that while 97% of organisations recognise they must transform their workplaces, over 60% haven't even started the process.

The biggest barrier is lack of vision, with 55% of IT leaders citing "lack of a vision for how digital workplace transformation could support our strategic goals" as a top-three obstacle. "Many of the organisations didn't have a very clear vision of the end state," Rakshit reveals. "They lack a very clear understanding of what this technology can bring to them. They basically get stuck with the existing state and think only incrementally on top of it."

Competing priorities represent another major challenge, with 44% of IT leaders ranking other IT initiatives taking precedence over digital workplace transformation among their top three barriers. Additionally, 44% cite not understanding how to transform the digital workplace as a primary obstacle.

> **"I predict every person within the company is going to have a digital twin which is helping them on the personal side and on the professional side"**
>
> **Rakshit Ghura,**
> VP and General
> Manager of Digital
> Workplace Solutions,
> **Lenovo**

The research also highlights insufficient understanding of user needs as a barrier. “Unfortunately, the way IT has been designed, it is more dictatorial – you dictate, you decide what the other person should be getting,” Rakshit states.

Several misconceptions compound these barriers. Despite 89% of IT leaders understanding that realising Gen AI’s benefits demands total digital workplace transformation, many still hold unrealistic expectations. “Everybody thinks AI is plug-and-play architecture, and it’s a switch-on, switch-off kind of a solution,” Rakshit explains. “Unfortunately it is not. It requires you to really rethink your people, process, technology – all the different elements.”

Data quality often receives insufficient attention. “Many of the companies think data doesn’t matter when it comes to Gen AI,” Rakshit notes. “But the reality is your Gen AI output would be as good as the data which is ingested into it.”

Organisations also mistakenly believe all AI models are interchangeable. “People think all Gen AI models are created equally,” Rakshit says. “But the reality is all the LLM models are very different. It really depends upon what role, what use case which you want to target with the help of Gen AI.”

Enterprise implementations demonstrate transformation potential

A Hong Kong-headquartered global airline with 30,000 employees and US$11bn revenue transformed its IT operations through Lenovo’s Digital Workplace Solutions.

The airline operated in 190 markets across 60 countries with fragmented IT support.

“Their pain point was that their employees were not getting the consistent experience they wanted,” Rakshit explains. “Every country used to have their own IT, and they used to have their own specialised players.”

Lenovo implemented a unified employee experience across all locations. “We provided one consistent employee experience for this organisation right across all the countries, across all the suppliers,” Rakshit says.

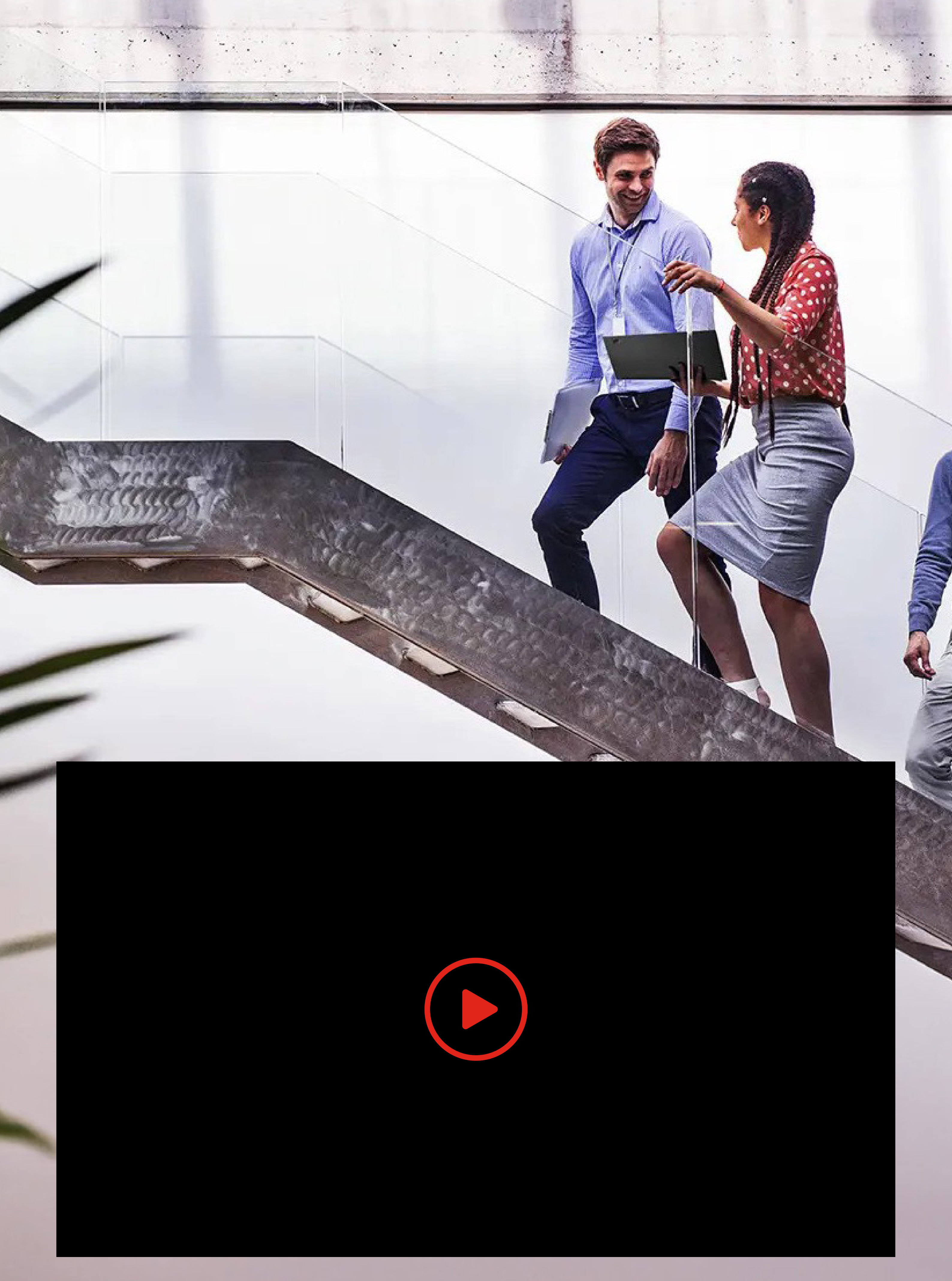
A Japan-based multinational conglomerate with 180,000 employees implemented Lenovo TruScale DaaS to modernise workplace technology delivery. "Every employee got an asset which was best suited for their job role," Rakshit describes. "If somebody needed a new device, they just got the new device delivered to their home address or office address and straight away they could open that device, put in their credentials and start working."

Organisations can begin seeing measurable results within three to six months of implementation.

89%

of IT leaders understand that realising Gen AI's benefits demands total digital workplace transformation

Source: Lenovo Work Reborn Research Series 2025



“Generally from our experience this kind of a solution takes anywhere between three to six months to be deployed and start delivering results for the organisation,” Rakshit explains.

Future workplace design includes AI agents alongside human teams

The future workplace will undergo fundamental transformation through AI integration. “AI is going to fundamentally change the workplace, fundamentally change the workplace design – how we are working, how we are engaging with our colleagues, how we do our day-to-day stuff,” Rakshit predicts.

“My view of the end state of Gen AI would be that every person within the company is going to have a digital twin which is helping them on the personal side and on the professional side, to do all the mundane tasks, all the repetitive tasks,” Rakshit explains.

Lenovo offers comprehensive services to help organisations navigate this transformation. “We really have end-to-end consulting, system integration, and managed services catalogue around helping an enterprise to embrace the AI solutions in their environment.”

Teams will ultimately include both human and AI members. “Beyond employees, our co-workers would also be machines,” Rakshit envisions. “It will not just be humans. It may happen that I’m leading a department. I have a team of 15 humans and 30 AI agents working as part of my team.” ○

THE AI SPL

HOW GOVERNANCE IS DIVID

GLOBAL LEADE

As the EU's AI Code of Practice develops alongside global AI acts, leaders face the ultimate choice of governance over innovation and a divide is appearing

WRITTEN BY: KITTY WHEELER

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U.S. President Donald Trump arrives to speak during the “Winning the AI Race” summit

CREDIT: CHIP SOMODEVILLA VIA GETTY IMAGES

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AI regulation has become the tech world's equivalent of a three-dimensional chess match – with governments, companies and regulatory bodies all making moves that will change how AI develops for decades to come.

AI has gone from being an inconceivable idea to easily generating photorealistic images of people who don't exist, convincing people of misinformation and making decisions that affect real careers.

It's no wonder that it now requires governance. But the catch is, that AI models are trained on data scraped from across the internet, complete with all the biases, errors and questionable content that entails.

Europe fired the starting gun with the AI Act in August 2024, establishing the world's first framework for AI regulation.

The UK then took a different tack, preferring existing regulators to handle AI within their sectors.

Meanwhile, China has been quietly building its own rules focused on content control and national security.

But the chess game got more apprehensive when US President Donald Trump returned to the White House with a radically different vision.

While Europe obsesses over transparency and safety, President Trump's team wants to eliminate what they call "woke" AI and tear down regulatory barriers.

The EU AI Code of Practice's three key requirements for companies developing general-purpose AI models:

- **Transparency**
- **Copyright compliance**
- **GPAI with Systemic Risk (GPAISR)**

As the EU's voluntary AI Code of Practice has become the latest battleground, tech and AI companies are forced to pick sides in a debate that goes beyond technical standards to fundamental questions about power, values and the future of human-machine interaction.

The EU AI Code of Practice: Making technology and AI leaders pick a side

The EU's code is a 50-page document that could determine how the most powerful AI systems in the world operate.

The focus in the code on general-purpose AI models shows a key insight into what the world is worried about – as unlike previous technologies, these systems can be deployed across countless applications with minimal modification.

ChatGPT, Claude and their competitors are capable of writing code, analysing legal documents, tutoring students or generating marketing copy. That versatility makes them very valuable and potentially dangerous in equal measure.

AI VIDEOS

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**Sam Altman,
CEO,
OpenAI**

As a result, the code tackles three main areas that have been on AI researchers and leaders minds:

First, transparency requirements mean companies must document how their models work and what data they used for training.

Second, copyright compliance rules force companies to explain how they obtained their training material.

The third requirement covers “GPAI with Systemic Risk” or (GPAISR) – essentially the most powerful models including OpenAI’s o3 and Google’s Gemini 2.5 Pro that face additional scrutiny including regular safety evaluations and risk assessments.

The penalties are designed to hurt even the biggest companies. Fines can reach €35m (US$38.5m) or 7% of global annual turnover.

For context, 7% of Meta’s 2023 revenue would be roughly US$8.4bn.

OpenAI and Microsoft choosing compliance over confrontation

OpenAI’s decision to sign the code is a sizable strategic bet.

The company behind ChatGPT has essentially decided that playing ball with European regulators is worth the compliance costs and restrictions.

“Signing the code reflects our commitment to providing capable, accessible and secure AI models for Europeans to fully participate in the economic and societal benefits of the Intelligence Age,” the company says in its announcement.

Additionally, Anthropic, the AI company that prides itself on safety, has also announced its intention to sign.

"We believe the code advances the principles of transparency, safety and accountability – values that have long been championed by Anthropic for frontier AI development," the company says.

Microsoft appears likely to follow suit. Brad Smith, Microsoft's Vice Chair and President, indicates support while acknowledging the need for careful review, "I think it's likely we will sign. We need to read the documents," he says.

"Our goal is to find a way to be supportive and at the same time, one of the things we welcome is the direct engagement by the AI Office with industry."

The participation of these major players sends a message to the rest of the industry: European AI regulation isn't going away and the smart money is on engagement rather than resistance.

Meta fighting back against EU red tape

Meta's pushback against the code shows deeper tensions about how AI regulation could reshape competitive dynamics.

Joel Kaplan, Meta's Chief Global Affairs Officer and former White House Deputy Chief of Staff, says: "Europe is heading down the wrong path on AI," claiming the code would "throttle the development and deployment of frontier AI models in Europe and stunt European companies looking to build businesses on top of them."

**Brad Smith,
Vice Chair and
President,
Microsoft**

CREDIT: CHIP SOMODEVILLA VIA GETTY IMAGES

U.S. President Donald Trump displays a signed executive order during the "Winning the AI Race" summit

Joel's opinion speaks on behalf of many, as the agreement could impact companies' innovation and success.

What makes Meta stand out is it has pursued a different strategy from competitors, by releasing its Llama models as open-source software. This approach aims to democratise AI development but also creates different regulatory challenges.

Joel's critique that "the code introduces several legal uncertainties for model developers, as well as measures which go far beyond the scope of the AI Act" shows a persistent problem in tech regulation: rules written for yesterday's technology often struggle to address the future's innovations – and no technology is evolving faster than AI.

More deeply, the split between technology and AI companies reveals something important about the current moment in AI development. Those backing the code tend to emphasise their commitment to safety and social responsibility, whereas critics focus on innovation and competition.

5

rance, and credit guarantees (22 U.S.C.9621); and technical
stance and feasibility studies (22 U.S.C. 2421(b)).

Sec. 6. General Provisions. (a) Nothing in this order
l be construed to impair or otherwise affect:

(i) the authority granted by law to an executive
department or agency, or the head thereof; or

(ii) the functions of the Director of the Office
of Management and Budget relating to budgetary,
administrative, or legislative proposals.

(b) This order shall be implemented consistent with
pplicable law and subject to the availability of
ppropriations.

(c) This order is not intended to, and does not, create
ny right or benefit, substantive or procedural, enforceable at
law or in equity by any party against the United States, its
departments, agencies, or entities, its officers, employees, or
agents, or any other person.

(d) The costs for publication of this order shall be borne
by the Department of Commerce.

THE WHITE HOUSE,

> **“WE BELIEVE WE’RE IN AN AI RACE AND WE WANT THE US TO WIN THAT RACE”**
>
> **DAVID SACKS,**
> CRYPTO TSAR,
> TRUMP ADMINISTRATION

President Trump declaring war on “woke” AI systems

If the European approach represents regulation through democratic deliberation, President Trump’s AI strategy looks very different.

The administration’s focus on eliminating “woke” AI has turned technical policy into an ideological battleground.

David Sacks, Trump Administration Crypto Tsar, told reporters: “We believe we’re in an AI race and we want the US to win that race.”

President Trump says at an AI summit: “The American people do not want woke Marxist lunacy in the AI models,” according to the Guardian.

“Once and for all, we are getting rid of woke.”

The President asserted that Former US President Joe Biden had “established toxic diversity, equity and inclusion ideology as a guiding principle of American AI development.”

Trump added: “So you immediately knew that was the end of your development.”

One of President Trump's executive orders requires AI companies receiving federal funding to maintain politically neutral models, but the metrics for determining bias are contentious and subjective. But what counts as political neutrality? Who decides?

The focus on "woke" AI echoes real concerns among conservatives about tech companies' influence on public discourse – as AI chatbots and image generators have become the latest flashpoint in complaints about liberal bias in technology.

Are governance wars masking deeper fears about AI supremacy?

While the UK, EU and the US erect AI Acts and codes to try and tame AI's development to be safer, is it possible that the noise is masking deeper anxieties about global technological leadership?

Chinese companies like DeepSeek have released AI models that rival American systems, often at lower cost. This competition alone has shattered assumptions about permanent US dominance in technology.

"AI is a revolutionary technology that's going to have profound ramifications for both the economy and national security," David says, according to the BBC.

"It's just very important that America continues to be the dominant power in AI."

This framing treats AI development as a national security issue rather than a commercial or social one.

CREDIT: ROY ROCHLIN VIA GETTY IMAGES

David Sacks,
Crypto Tsar,
Trump Administration

> **“THE WHITE HOUSE AI ACTION PLAN WAS WRITTEN BY AND FOR TECH BILLIONAIRES AND WILL NOT SERVE THE INTERESTS OF THE BROADER PUBLIC”**
>
> **SARAH MYERS WEST,**
> CO-EXECUTIVE DIRECTOR
> AI NOW INSTITUTE

If AI is a strategic technology like nuclear weapons, then regulation becomes a matter of geopolitical competition rather than consumer protection.

Meanwhile, the Trump administration’s approach prioritises speed and scale over safety and social concerns by removing regulatory barriers and emphasising American competitiveness.

Whether this succeeds will depend partly on whether other countries follow suit or maintain different priorities.

The battle for AI supremacy revealing democracy’s limits

On a deeper level, what’s stark about the divergence between US and EU approaches to AI governance, is it shows a polar opposite approach by leading nations to a global problem.

Europe’s emphasis on transparency, safety and fundamental rights stems from hard-learned lessons about how powerful technologies can be misused. Yet the American approach under President Trump prioritises innovation and competition, showing traditional faith in market mechanisms and concerns about regulatory burden.

These competing visions create practical challenges for global technology and AI companies independently and working together.

More than 40 major European businesses have already asked for delays in implementing the AI Act, citing concerns about competitive disadvantage.

Meanwhile critics of President Trump’s approach warn about the risks of deregulation.

Sarah Myers West, Co-Executive Director at AI Now Institute argues that “the White House AI Action plan was written by and for tech billionaires and will not serve the interests of the broader public.”

She adds: “The administration’s stance prioritises corporate interests over the needs of everyday people who are all already being affected by AI.”

Sarah Myers West,
Co-Executive
Director,
AI Now Institute

THE EU'S CODE IS A **50-PAGE** DOCUMENT

This critique sums up the distributional consequences of AI policy – who benefits and who bears the costs of different regulatory approaches.

Jim Secreto, a former Biden Administration Official, warns that dismantling safety measures could backfire: "Accelerating innovation is essential, but dismantling responsible guardrails risks turning America's AI revolution into a reckless gamble."

The global nature of AI development complicates these regulatory choices.

Despite mounting opposition to European rules, former Internal Market Commissioner Thierry Breton has insisted the framework will proceed as scheduled.

Jim warns that "promoting aggressive AI exports without reasonable controls strengthens China's hand" – suggesting that American deregulation could inadvertently benefit competitors.

Whether the future prioritises safety over speed, transparency over efficiency, or democratic values over competitive advantage, remains an open question with profound implications for everyone. ○

SECRETARIAT
DES COMMISSION

Thierry Breton,
Former Internal Market
Commissioner,
European Comission

Delska Targets Hyperscaler Expansion Across the Baltics

AD FEATURE WRITTEN BY:
MARCUS LAW

PRODUCED BY:
LEWIS VAUGHAN

Baltic data centre group **Delska** has expanded its infrastructure capacity as AI workloads push power requirements of up to 250kW per rack

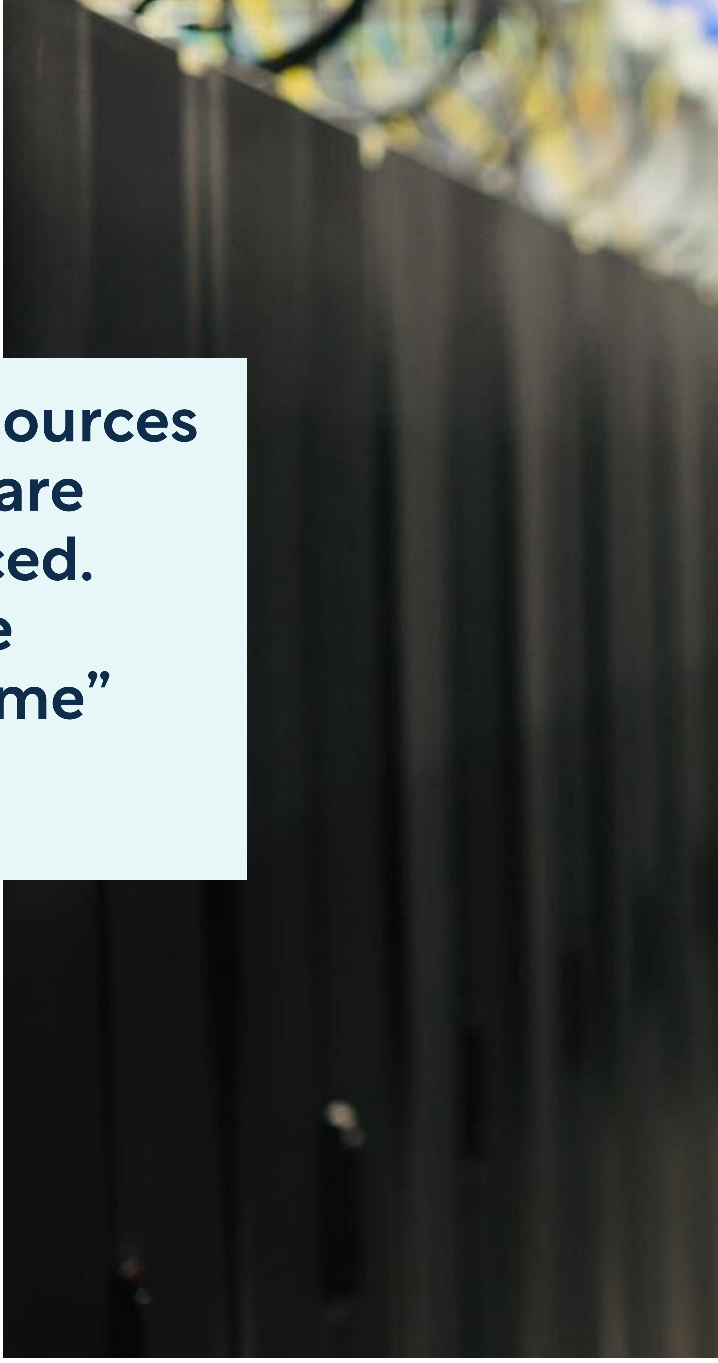
The Baltic data centre market is transforming as regional operators position themselves to capture growing demand from global hyperscalers and AI workloads. Leading this change is Delska, a newly unified infrastructure group born from the merger of established Latvian and Lithuanian companies, now operating facilities and networks spanning from the Baltics to Frankfurt.

At the helm is Chief Executive Andris Gailitis, a 30-year industry veteran who witnessed the birth of the commercial Internet in the region. Starting as a university technician in 1999, when Internet access was largely restricted to academic institutions and wealthy corporations, he has guided the company through decades of technological evolution and today his approach remains focused on core infrastructure rather than chasing software trends.

“We are a pure infrastructure player, and we are doing the best with a deep expertise in the data centres and network field,” says Andris.

This infrastructure-first strategy has proved prescient. Data centres no longer just support business functions but have become critical infrastructure, with technology services now ranking alongside traditional industries in importance.

Andris Gailitis,
CEO,
Delska



> **“More than 30% of the resources needed by hyperscalers are currently being outsourced. So, I believe we are in the right place, at the right time”**
>
> **Andris Gailitis,**
> CEO,
> **Delska**

“When we started, IT technologies were helping other industries,” explains Andris. “Now IT is becoming, in most countries, a critical industry itself: the same as hospitals, the same as banks. If someone completely stopped the communications and data centre industries, it would mean a major crisis for modern society.”

The company’s evolution accelerated through strategic acquisition by Quaero European Infrastructure Fund II and consolidation of a group of companies under the new brand Delska. In 2024, Delska initiated a rebranding process, combining Latvian data centre operator DEAC and Lithuanian Data Logistics Centre (DLC), integrating Lithuanian RackRay a year later to form a comprehensive regional data centre and network infrastructure provider.

“By merging expertise and IT teams, we’ve evolved and broadened our spectrum of portfolio to become a one-stop provider for customers’ IT infrastructure, encompassing cloud services, server rental, colocation, security, including disaster recovery and backup, network solutions and managed services, which sets us apart from pure colocation providers,” explains Delska Chief Marketing Officer Maria Bergere.

The companies that formed Delska have operated in the region for 26 years, providing industry expertise, including knowledge of local regulations and business practices that newer competitors lack.

“What sets us apart is not just our technology but our more than 26 years of experience, enabling us to offer

more than infrastructure," says Maria. "We provide hands-on expertise for daily administration, monitoring and maintenance, backed by SLAs that guarantee uptime and reliability."

Delska completes Riga facility with multimillion investment and modular AI design

Delska's new Riga facility addresses a problem facing every data centre operator: nobody knows how much power AI applications will need. Traditional hosting uses 10-20 kilowatts per rack, but AI can demand anywhere

ANDRIS GAILITIS

CEO

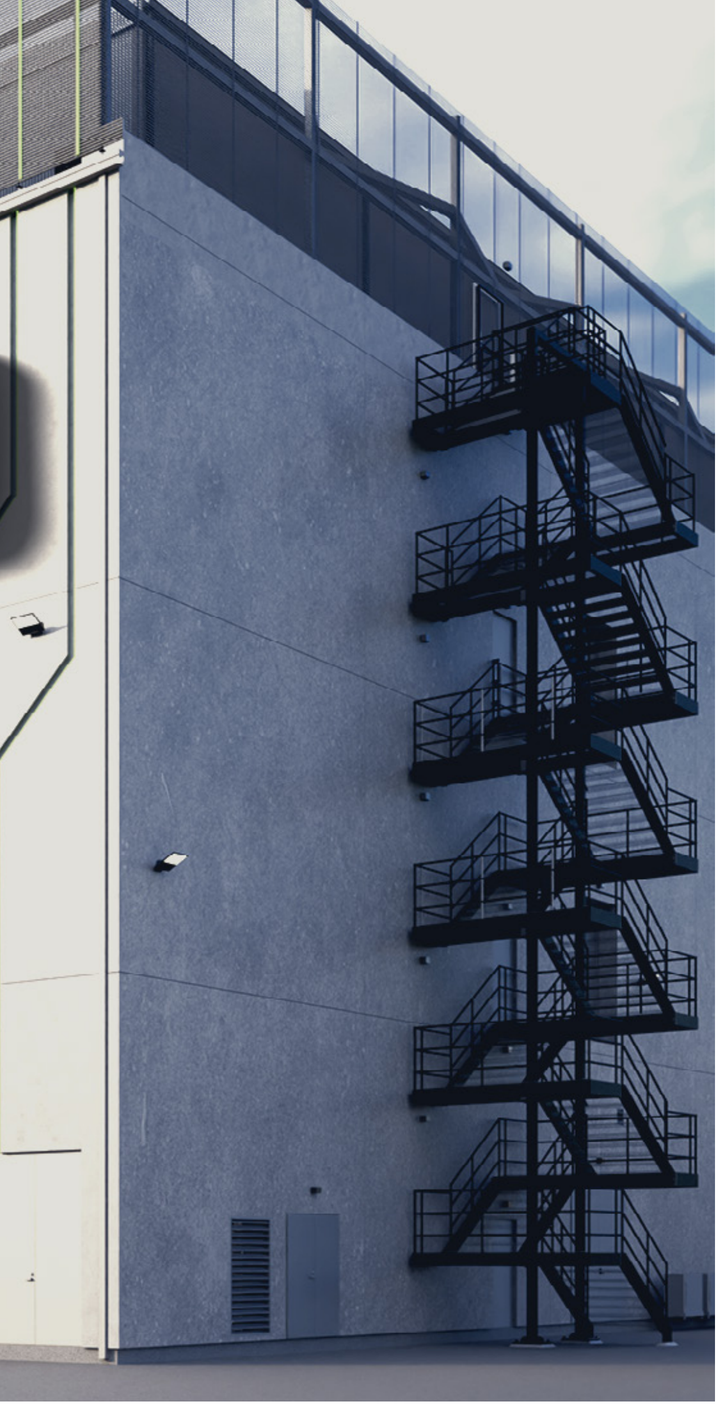
Andris Gailitis has been in the lead since 1999, initially as CTO, then as CEO of DEAC in 2005. In April 2022, Andris also took on the CEO role at Data Logistics Center (DLC). The two companies merged in June 2024 to form Delska.

Gailitis holds an IT degree from Riga Technical University (RTU). Early in his career, Andris worked as a system administrator at Riga Water and as a laboratory assistant at RTU. From 2011 to 2021, Gailitis served as a board member of RadioTV-chaula.tv.

Under his leadership, Delska's infrastructure expanded, with another 10 MW facility currently in development.

> **“Built on a modular design, the site scales from 10 MW to 30 MW, enabling right-sized, on-demand capacity without overprovisioning”**

Rihards Kaletovs,
Chief Technology Officer,
Delska



from 50 to 250 kilowatts. This makes capacity planning extremely difficult.

Chief Technology Officer Rihards Kaletovs designed the new facility in Latvia to handle both scenarios without wasting money on unused capacity.

"Built on a modular design, the site scales from 10 MW to 30 MW on owned land next to the construction site, enabling right-sized, on-demand capacity without overprovisioning," he says.

The facility uses two cooling systems. Standard air-cooling handles regular servers, whilst liquid cooling manages high-power AI chips that would otherwise overheat.

"Our dual-mode cooling setup supports both traditional air-cooled systems and high-density liquid cooling loops, designed explicitly for GPU-intensive AI and ML clusters," says Rihards.

Andris explains why this flexibility matters for business planning.

"At the simple level of regular hosting, it's 10-20 kilowatts per rack," he says. "When it comes to AI, it's a complete disaster in terms of predictability. You can have 50 kilowatts, 100, 250."

Building separate facilities for different power requirements would cost too much. Instead, Delska designed a new facility that handles both.

"You can't build a data centre capable of hosting a 10-kilowatt rack and a one-megawatt rack," says Andris. " So, when you are planning server rooms or a data centre, you need to plan these levels and ask, what is the upper limit for you?"

Connectivity features at Delska's new facility include direct cloud connections, low-latency links and a carrier-neutral meet-me room where multiple network providers can connect.

"The facility empowers customers to build hybrid, high-performance environments with zero vendor lock-in," says Rihards.

The facility is set to open in autumn 2025, with land available for expansion and power capacity already secured for up to 30 MW for future deployments.

Delska leverages the Northern European climate

Data centres consume roughly 1% of global electricity, making efficiency a business imperative as much as an environmental concern. Delska's Riga facility targets a Power Usage Effectiveness ratio of less than 1.3 – below the industry average of 1.6 – by exploiting geographic advantages that many operators cannot access.

The facility operates on 100% renewable energy sourced from Northern European wind farms, eliminating carbon emissions from power consumption. Even backup generators use Neste MY diesel derived from renewable feedstocks rather than fossil fuels, ensuring sustainability extends to emergency power systems.

The region's cooler temperatures allow the facility to use free-cooling systems for extended periods throughout the year, reducing reliance on energy-intensive mechanical cooling that typically accounts for 40% of data centre power consumption. Free cooling draws cold outside air directly into the facility when ambient temperatures drop below server inlet requirements.

The facility combines multiple efficiency technologies: hot-aisle containment prevents warm and cold air mixing, magnetic-bearing chillers eliminate friction losses and modular design prevents overprovisioning that wastes energy on unused capacity.

"Our location in the EU – with its Nordic climate, low electricity costs and proximity to major European hubs – positions us as a bridge between European and Asian markets," Maria explains.

Energy efficiency becomes more critical as AI workloads drive power consumption higher. Where traditional servers consume steady power levels, AI applications create variable loads that challenge cooling systems and grid capacity.

Beyond operational efficiency, Delska explores waste heat recovery programmes with municipal authorities. Data centres typically reject heat

“Our location in the EU positions us as a bridge between European and Asian markets”

Maria Bergere,
Chief Marketing Officer,
Delska

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EXCELLENT
TRANE

as waste, but recovery systems can capture this energy for district heating networks that warm residential and commercial buildings.

Andris acknowledges the tension between growing AI infrastructure demands and environmental constraints but sees efficiency improvements as the solution.

"There are a lot of new challenges coming each day," he says. "It's true – there are struggles with grids, and big economies are saying data centres consume too much electricity. But AI-capable data services will not go anywhere. They are here to stay."

Delska constructs for enterprises and hyperscaler needs

Delska does not directly compete with major cloud providers for end customers. Instead, it builds infrastructure for these companies' regional presence or enterprises' specialised needs, like AI and high-performance computing (HPC).

"If we are looking at hyperscalers providing services to social networks or something at that level, we are not competing," says Andris. "We are looking to be the suppliers for them. More than 30% of the resources needed by hyperscalers are currently being outsourced to regional

operators, so I believe we are in the right place, at the right time."

This supplier role requires specific capabilities, particularly GPU hosting for AI applications. Besides that, businesses need to deploy infrastructure closer to end users.

GPU services will become mandatory rather than optional in Delska's future offerings. The company assumes that each customer will need AI capabilities rather than treating it as a specialised requirement, ensuring immediate readiness to meet this need every time.

"By now it's clear that GPU and AI-capable hardware with availability for today or tomorrow must be part of this offering," says Andris. "It's not about what we want or don't want – it has to be provided soon."

Given Delska's extensive operational experience, the technical and R&D teams are advancing plans to implement GPU-based services in response to the accelerating AI boom.

"Flexibility is our strength; we can adapt to changing business requirements. Our specialisation has always been custom IT and network solutions. For example, we are offering custom-made private clouds for any customer's and specific industry's needs," says Andris.

European regulations are increasing compliance costs as data centres gain critical infrastructure status. These requirements affect pricing across the industry.

"Data centre hosting is no longer a simple, cheap infrastructure service," says Andris. "This regulatory push is adding bureaucracy to services, which, unfortunately, also means an increase in prices."

Chief Customer Officer Elita Kovalova says IT companies get the most value from Delska's services because they need reliable infrastructure without building their own data centres.

"Delska serves customers from more than 40 countries, a large part of which are IT companies, especially those developing software, hosting platforms, or delivering digital services," she says. "These customers rely on us for secure, scalable infrastructure that ensures high availability, strong performance and cost efficiency."

"Our goal is to reach the stage of growth Europe is experiencing today – hosting significantly larger customers," says Andris. "Not just tens of racks consuming hundreds of kilowatts, but deployments with hundreds of racks."

Elita says customer relationships involve understanding specific business requirements rather than selling standardised packages.

"What truly sets Delska apart is not just our technology, but our personalised approach – we take the time to understand each customer's IT needs and build long-term partnerships grounded in flexibility, responsiveness and trust," she says.

The rebranding focuses not just on internal process alignment, but foremost on customer requirements.

"Most importantly, our rebranding reflects a shift in focus: from being less about us to being more about our customers," says Maria. "We're committed to being the most personal technology behind your business, offering not just infrastructure, but a trusted partner for your growth."

“What truly sets Delska apart is not just our technology, but our personalised approach – we take the time to build long-term partnerships”

Elita Kovalova,
Chief Customer Officer,
Delska Latvia

> “At its heart, myDelska solves a fundamental problem: making cloud infrastructure as easy to control as it is to consume”

Edgars Lukss,
Chief R&D Officer,
Delska

MyDelska platform targets transparent cloud pricing

Delska built the myDelska platform in response to customer complaints about hidden charges and restrictive contracts from major cloud providers. Many companies discover that cloud services become expensive once they scale beyond basic usage levels.

Chief R&D Officer Edgars Lukss says the platform removes common pricing tricks that catch customers off guard.

"Our customers value performance and predictability, so we've removed traffic metering, introduced pay-as-you-go pricing, and built a platform that enables them to launch and manage virtual infrastructure in seconds, not minutes," he says.

The platform combines technical features that are usually spread across multiple platforms into a single interface. This reduces the complexity of managing IT infrastructure.

"MyDelska consolidates advanced features – such as real-time network topology maps, customisable firewalls, multi-tenant controls and advanced backup settings – into a clean and intuitive interface," says Edgars.

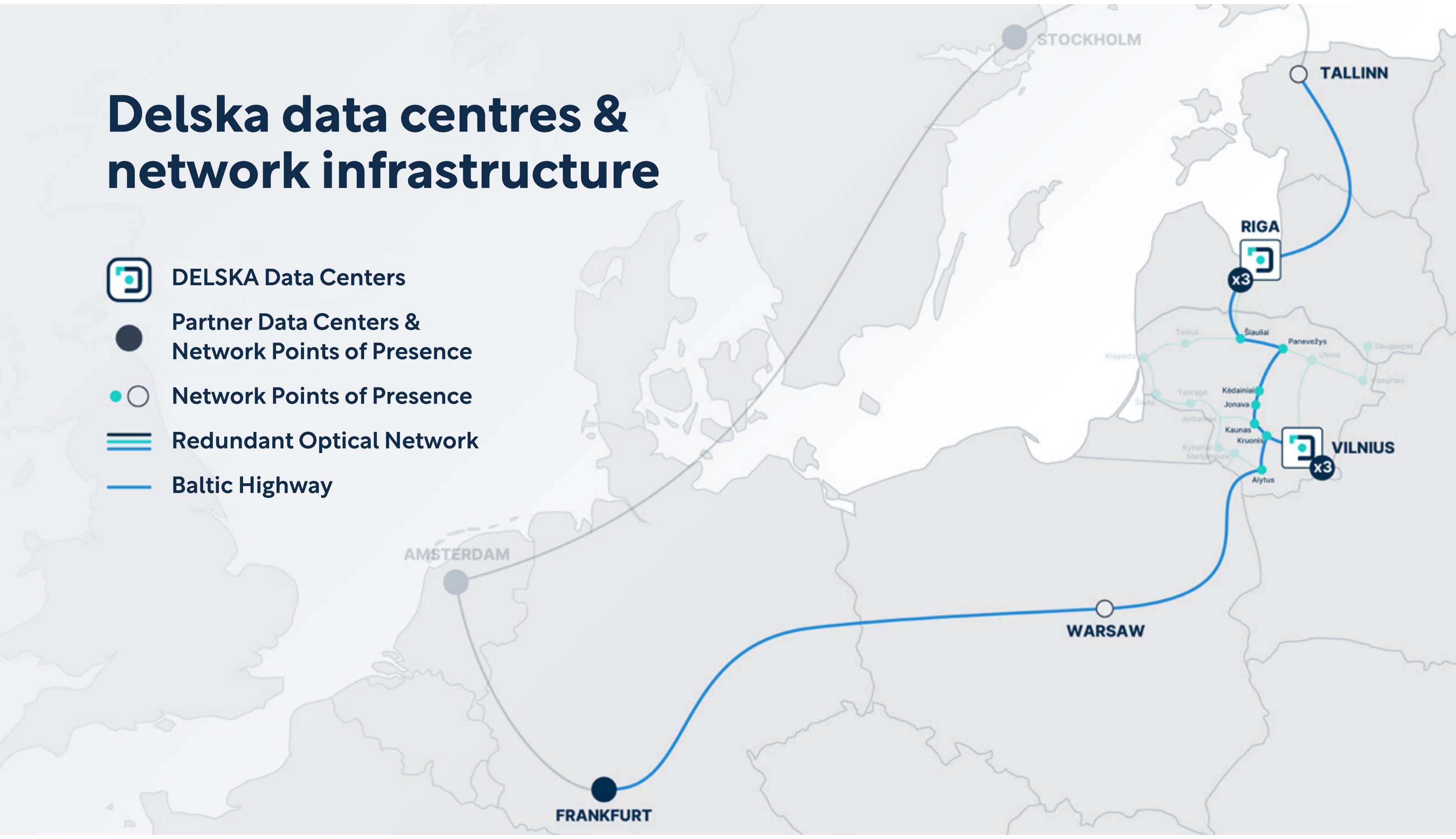
Delska develops its platform's cloud services independently rather than reselling services from Amazon, Microsoft or Google. This prevents licensing changes from affecting customer pricing. However, for enterprise-grade customers, Delska offers VMware-based public cloud

6 Delska data centres

4,000km of optical fibre

19 MW: Current capacity in 6 Tier II & III data centres

30 MW: Plans to expand on owned land with secured power



Delska data centres & network infrastructure

DELSKA Data Centers
Partner Data Centers & Network Points of Presence
Network Points of Presence
Redundant Optical Network
Baltic Highway
STOCKHOLM
TALLINN
RIGA
x3
Telšiai
Šiauliai
Panevežys
Daugavpils
Klaipėda
Utena
Visaginas
Šilutė
Tauragė
Kėdainiai
Jonava
Jurbarkas
Kaunas
Kruonis
Kybartai
Marijampolė
Alytus
VILNIUS
x3
AMSTERDAM
WARSAW
FRANKFURT

and private clouds with virtualisation upon the customer's choice.

"You see what's happening around the big hyperscale players – they are, in general, a monopoly in the world," says Andris. "And we saw that there was space in the market for a different approach."

Edgars summarises the platform's purpose: "At its heart, myDelska solves a fundamental problem: making cloud infrastructure as easy to control as it is to consume," he says.

Further development plans include adding bare metal service to the self-service platform.

Next-gen network infrastructure driving regional connectivity

Delska operates a high-speed 100G Baltic Highway network infrastructure alongside its data centres, recognising that applications need low-latency connections across multiple locations. To support businesses with geographic distribution requirements, the company has established Points of Presence (PoPs) through its network and partner data centres across Europe.

Chief Operating Officer of Delska's Lithuanian branch, Viktoras Aliasevicius, explains that network investment addresses rapid bandwidth growth driven by cloud adaptation, IoT deployments and AI applications.

"Our connectivity spans the Baltics, Poland, Germany (Frankfurt) and the Netherlands (Amsterdam), supported by strategically placed PoPs across the region and the EU," he says.

In Lithuania, Delska owns and operates a dark fibre optical network, giving customers direct access to higher bandwidth capacity, lower latency, and additional layers of resilience. To enable long-distance, high-volume data transmission, the company deploys DWDM (Dense Wavelength Division Multiplexing), which increases cost-efficiency while delivering scalable bandwidth.

This is complemented by a secure, redundant Layer 2 (L2) Ethernet network that supports multi-route connectivity with flexible bandwidth options of 1G, 10G and 100G between PoPs.

For businesses requiring global reach, Delska also provides IP transit services with speeds of up to 100G, leveraging Tier 1 backbone providers at every PoP. This ensures businesses can reliably connect with their users worldwide. Seamless links to major Internet Exchange points further guarantee fast, direct access to leading cloud providers.

Beyond connectivity, security investment addresses cyber threats and regulatory requirements. The NIS2 directive mandates enhanced security measures for critical infrastructure operators, driving investment in protection systems.

"To meet the evolving needs of IoT, public cloud, AI and other advanced technologies, we are making significant investments in internet capacity, DDoS mitigation and strengthening our cybersecurity framework in line with ISO standards and the forthcoming NIS2 directive," says Viktoras.

This network foundation supports customer expansion across regions while bringing data closer to end users, accelerating performance, reducing latency, and ensuring high-capacity connectivity from the Baltic region to data exchange hubs in Warsaw, Berlin, Frankfurt, Amsterdam, Stockholm, Helsinki, and extending even further via last-mile connectivity through local and international partners.

"We are making significant investments in internet capacity, DDoS mitigation and strengthening our cybersecurity framework"

Viktoras Aliasevicius,
Chief Operating Officer,
Delska Lithuania

Delska's 25 years of expertise to power future growth

Over a quarter of a century, Delska has built a strong market position in the Baltic region where infrastructure expertise is a key advantage. Today, the company employs more than 95 certified IT professionals providing 24/7 multilingual technical support, backed by partnerships with over 30 leading software and hardware vendors and customers across more than 40 export markets.

The convergence of AI demand, hyperscaler outsourcing trends and European regulatory requirements creates significant opportunities for regional operators with deep infrastructure expertise. Delska's investments in renewable energy, modular facilities and comprehensive network infrastructure position the company to benefit from these market developments, whilst maintaining the personal service approach that differentiates it from global competitors.

Chief Financial Officer Kaspars Berzins says the company's financial position supports continued investment in regional infrastructure development.

"We're investing with a clear goal: to help make the Baltic region a key new hub for data centers," says Kaspars. "It's a strategic step, and we believe the timing couldn't be better given how the market is evolving in the Baltics, Northern and Eastern Europe. Our financial position enables us to support AI-ready infrastructure, our self-service platform myDelska, sustainable solutions and to create a strong regional data centres' ecosystem. These investments put Delska in a strong position to drive regional growth while helping customers accelerate their digital transformation securely and sustainably." For Andris, the current environment represents both validation of long-term strategy and readiness for continued evolution.

"We have many projects ahead and new milestones to reach," he says, "so we are very optimistic about the development and growth of the industry."

> "We're investing with a clear goal: to help make the Baltic region a key new hub for data centres"
>
> **Kaspars Berzins,**
> Chief Financial Officer,
> **Delska**

AI AND SUSTAINABILITY

TRANSFOR CLIMATE AC

AI can cut forecasting costs 90% whilst delivering hyper-local climate alerts for transport, energy and insurance sectors adapting to climate change

WRITTEN BY: MARCUS LAW

RMING CTION

AI is transforming weather forecasting from a computational brute-force exercise into a pattern recognition challenge. Traditional numerical weather prediction systems solve complex atmospheric equations across global grids, requiring supercomputers to process terabytes of data for forecasts that often miss localised phenomena critical to business operations.

Machine learning models take a different approach. Instead of solving physics equations in real-time, AI systems analyse decades of historical weather data to identify atmospheric patterns that correlate with specific outcomes. This pattern-based forecasting enables predictions at 200-metre resolution whilst using a fraction of the computational power required by conventional systems.

The shift matters because climate change is increasing the frequency of extreme weather events that existing forecasting infrastructure struggles to predict. Traditional models operate at kilometre-scale resolution and update every six to 12 hours. AI systems can provide street-level forecasts updated continuously, enabling businesses to respond to weather risks with precision previously unavailable to commercial users.

"AI-powered weather forecasting has the potential to revolutionise high-quality, high-resolution weather and disaster management solutions, particularly in this accelerating phase

of climate change," says H.E. Dr. Abdulla Al Mandous, Director General of the National Center of Meteorology UAE. "By enhancing prediction accuracy and enabling hyper-local, real-time forecasts, this technology empowers better decision-making and strengthens resilience against climate challenges.

"We are excited to see how these innovations will shape the future of sustainability and drive more effective, data-driven solutions. The National Center of Meteorology UAE is rapidly embracing AI technologies for advanced weather forecasting and disaster management, positioning itself at the forefront of global efforts in weather and climate resilience."

Weather-related disruptions account for 30% of flight delays according to Federal Aviation Administration data, costing airlines billions annually. Traditional forecasting provides general airport conditions but cannot predict specific wind shear or visibility affecting individual runways. Ground transportation faces similar challenges where localised fog and precipitation create safety hazards that regional forecasts cannot address.

Behind G42 and Nvidia's AI and Earth-2 partnership

G42 and Nvidia have developed an AI-powered weather forecasting system through their Earth-2 Climate Tech Lab in Abu Dhabi. The partnership produces 200-metre resolution forecasts using a generative downscaling model that learns small-scale regional physics to predict extreme weather events.

H.E. DR. ABDULLA AHMED AL MANDOUS

TITLE: DIRECTOR GENERAL & PRESIDENT OF WMO

COMPANY: NATIONAL CENTER OF METEOROLOGY UAE & WORLD METEOROLOGICAL ORGANIZATION

INDUSTRY: METEOROLOGY & CLIMATE SCIENCE

President of WMO since 2023, leading global weather and climate initiatives. Over 30 years meteorology experience, modernising UAE's weather infrastructure and establishing rain enhancement programs.

H.E. Dr. Abdulla
Ahmed Al Mandous,
Director General &
President of WMO

Dr. Andrew Jackson,
Group Chief AI Officer,
G42

DR. ANDREW JACKSON

TITLE: GROUP CHIEF AI OFFICER

COMPANY: G42

INDUSTRY: ARTIFICIAL INTELLIGENCE

With nearly three decades of AI and data science experience, Andrew is a founding G42 member who led JAIS Arabic LLM development. Former Palantir MENA expansion leader and Etihad Airways digital transformation architect.

Inception, a G42 company working with Space42, has customised CorrDiff from Nvidia's Earth-2 platform for detailed urban forecasts. Core42, G42's digital infrastructure company, hosts the platform using Nvidia hardware. The system demonstrated capabilities through an end-to-end fog simulation over the UAE, addressing localised weather phenomena affecting multiple industries.

Andrew Jackson, Chief AI Officer at G42, says: "For AI to be truly transformative, it should be an accessible tool for governments and industries worldwide. Through our collaboration with Nvidia, we are bringing cutting-edge forecasting capabilities within reach of those who need them most. Because CorrDiff is designed to adapt to local weather behaviours, this technology is not only improving forecasting for the UAE but can also be tailored for regions worldwide facing climate volatility."

AI forecasting systems adapt to local weather patterns across geographical regions. Traditional models use global atmospheric equations that may not capture regional variations. AI systems learn from local historical data to improve predictions for specific areas over time.

Energy companies benefit from hyper-local weather forecasting for renewable energy management. The International Energy Agency reports that improved weather forecasting could increase wind energy efficiency by 15% through better wind pattern prediction. Current renewable energy forecasting operates at kilometre resolutions, making it difficult to predict conditions at individual installations. AI-powered systems provide forecasts for specific turbines or solar arrays.

How Nvidia physics AI models process climate data

Physics AI models process climate data by learning atmospheric patterns through data analysis rather than relying solely on mathematical equations. This approach enables faster forecast generation whilst reducing computational infrastructure requirements compared to traditional systems.

Dion Harris, Senior Director of HPC and AI Factory Solutions at Nvidia, says: "Hyper-local weather forecasting is becoming crucial to determining patterns and people positioning as climates around the world undergo change. G42 is innovating using the Nvidia Earth-2 platform to drive access to actionable information in areas that need it most."

The Nvidia Earth-2 platform provides computational frameworks for high-resolution climate modelling. Platform scalability allows organisations to process environmental data from satellite observations, ground-based sensors, and atmospheric monitoring systems. Traditional forecasting systems require supercomputing resources previously available only to major meteorological agencies. AI-powered forecasting democratises these capabilities.

Dion continues: "Weather forecasting has always required significant computational power, but AI is redefining what's possible. With Physics AI models for high-resolution climate modeling, we can now generate faster, more detailed, and more adaptive predictions. The scalability of accelerated computing allows us to process vast amounts of data efficiently, helping industries and governments better understand and respond to extreme weather patterns."

Insurance companies use AI-powered weather forecasting for operational improvements. Weather-related claims account for 60% of property insurance

DION HARRIS

TITLE: SENIOR DIRECTOR OF HPC AND AI FACTORY SOLUTIONS

COMPANY: NVIDIA

INDUSTRY: TECHNOLOGY/ SEMICONDUCTORS

Head of data centre product marketing at Nvidia, focusing on accelerated computing for HPC and AI. MBA from UC Berkeley, former roles at Dell/EMC and Symantec in enterprise technology.

Dion Harris,
Senior Director of HPC
and AI Factory Solutions,
Nvidia

losses globally according to Munich Re data. AI forecasting enables insurers to assess risks at specific locations rather than using broad regional data.

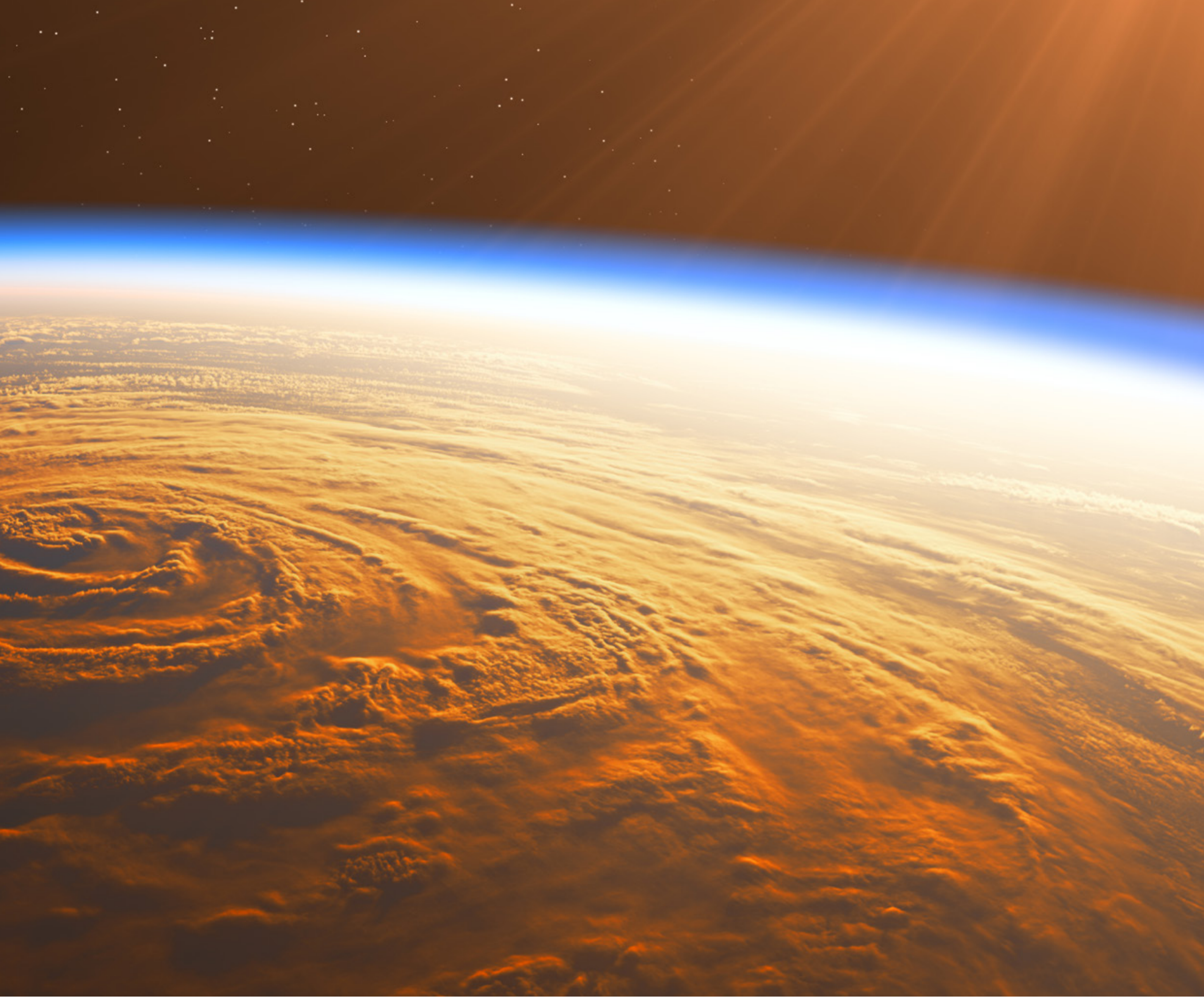
Technology expansion targets climate vulnerable regions

G42 explores expansion of hyper-local forecasting systems to climate-vulnerable regions across Africa, South Asia and Southeast Asia. These regions experience disproportionate climate change impacts despite lower emissions contributions.

Agricultural applications represent opportunities in developing regions. The Food and Agriculture Organization

HOW AI WEATHER FORECASTING WORKS

Traditional systems solve complex atmospheric equations in real -time using supercomputers. AI models analyse decades of historical weather data to identify patterns, enabling 200-metre resolution forecasts with a fraction of the computational power required by conventional kilometre-scale systems.



estimates weather-related events cause $5 billion in annual crop losses. Farmers dependent on rain-fed agriculture require accurate precipitation forecasts for planting and harvesting decisions.

Andrew adds: "The ability to generate hyper-local predictions gives decision-makers the confidence to act faster, plan better, and build more resilient systems. Beyond its impact on weather forecasting, this breakthrough has far-reaching applications in aviation, urban mobility, energy grid optimisation, and environmental planning. Hyper-local insights can reduce flight delays, improve road safety, optimise renewable energy distribution, and support climate-adaptive urban development."

Water resource management benefits from accurate precipitation predictions that enable utilities to manage reservoirs effectively. Early warning systems for extreme weather events can save lives where populations face climate impacts.

Dion concludes: "The scalability of accelerated computing allows us to process vast amounts of data efficiently, helping industries and governments better understand and respond to extreme weather patterns." ○

FWD
1573
Great Eagle 鷹君

FWD GROUP:
CLOUD TRANSFO
WITH A CUSTOM

ORMATION IER FOCUS

WRITTEN BY:
LOUIS THOMPSETT

PRODUCED BY:
LEWIS VAUGHAN

How Sandeep Pandey is leading FWD Group's technology transformation through cloud adoption, AI implementation and platform-driven innovation

FWD Group is driving significant change in the insurance industry across Asia, blending entrepreneurial spirit with customer-centricity. The company, operating in 10 markets across the region, has undergone a remarkable technological transformation in recent years under the stewardship of Sandeep Pandey, Group Chief Technology and Operations Officer. Since joining FWD four years ago, Sandeep has been instrumental in shifting the organisation's technological foundation and operational philosophy.

His journey to FWD followed experience gained at global FMCG and insurance companies, where he developed a unique perspective combining management acumen with technical expertise.

"I'm a computer science engineer by education, but I started my career in FMCG," explains Sandeep. "I realised very early in my career that technology and enabling functions exist to provide solutions for customers."

This philosophy has become central to Sandeep's approach at FWD. His experience at the FMCG company taught him the importance of focusing on consumer experience, establishing a mindset that has guided his work throughout his career.

> **"Quality, gratitude, attitude, and aptitude are my personal favourites – that's what drives me"**
>
> **SANDEEP PANDEY,**
> GROUP CHIEF TECHNOLOGY AND OPERATIONS OFFICER,
> FWD GROUP

Sandeep Pandey

"The talk was about consumer experience, not just customer experience," he notes. "Understanding how consumers interact with products comes naturally to me, which helps when addressing customer experience in insurance."

Sandeep's time at an insurance company during the global financial crisis proved particularly formative, teaching him valuable lessons about leadership during challenging times. The experience reinforced his belief in what he calls the three essentials of leadership.

"You've got to be clear as a leader, you've got to be courageous as a leader, but you cannot forget the humanity side of it," Sandeep explains. "That's what drives me every day."

When Sandeep joined FWD in September 2020, he identified significant opportunities to enhance the company's technological capabilities.

He quickly developed a strategic framework that would guide the transformation efforts.

"I created a three-six-twelve strategy – three strategic pillars, six objectives and twelve goals," he says. "The three strategic pillars were protecting FWD for our customers and colleagues, delivering change faster and putting technology at the heart of decision-making."

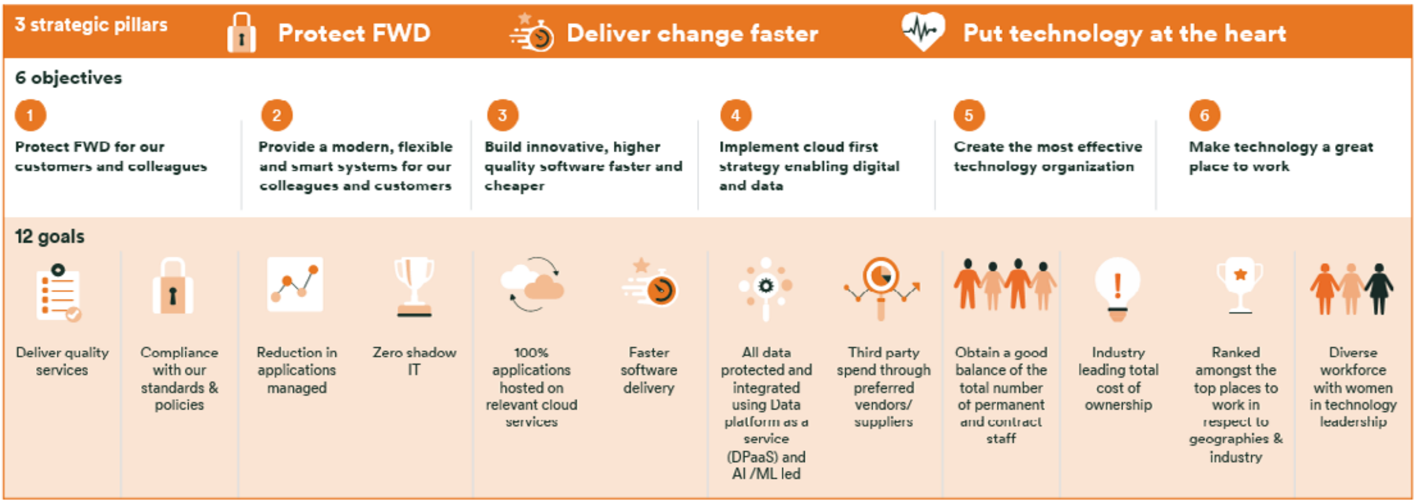
Cloud transformation provides foundation for innovation

Central to this strategy was an ambitious cloud transformation. As of 31 December 2024, 98% of FWD's applications were migrated to the cloud.

"It has been a tremendous journey. Cloud technology has positively impacted our software development and deployment, expediting time-to-market and enhancing customer experiences."

This wasn't a simple 'lift and shift' operation, but a comprehensive rationalisation of the company's application architecture. The approach has earned FWD numerous awards and established a foundation for further innovation.

The FWD three-six-twelve strategy



3 strategic pillars

- Protect FWD
- Deliver change faster
- Put technology at the heart

6 objectives

1. Protect FWD for our customers and colleagues
2. Provide a modern, flexible and smart systems for our colleagues and customers
3. Build innovative, higher quality software faster and cheaper
4. Implement cloud first strategy enabling digital and data
5. Create the most effective technology organization
6. Make technology a great place to work

12 goals

- Deliver quality services
- Compliance with our standards & policies
- Reduction in applications managed
- Zero shadow IT
- 100% applications hosted on relevant cloud services
- Faster software delivery
- All data protected and integrated using Data platform as a service (DPaaS) and AI /ML led
- Third party spend through preferred vendors/ suppliers
- Obtain a good balance of the total number of permanent and contract staff
- Industry leading total cost of ownership
- Ranked amongst the top places to work in respect to geographies & industry
- Diverse workforce with women in technology leadership

AWARD-WINNING INNOVATION AT FWD GROUP

The Digital Banker
Best Customer Insights Initiative – Insurance (2024)

The Digital Banker
Best Cloud Initiative for Digital CX – Insurance (2024)

IDC
Best in Future of Customer Experience (2024)

Infopro Digital
Best AI Initiative (2024)

Infopro Digital
Best Cloud Initiative (2024)

Insurtech Connect Asia
Digital Insurer Award (2024)

Celent
Model Insurer Award for Customer Experience Transformation (2024)

Celent
Model Insurer Award for Data, Analytics, and AI (2024)

The Digital Banker
Best Mobile Insurance App (2024)

"We're winning awards not just because we moved to the cloud, but because of how we did it," Sandeep explains.

The cloud transformation has enabled FWD to move quickly in other areas, particularly in implementing AI. Sandeep notes that this has given the company a significant competitive advantage.

"We can implement generative AI much faster because we're not struggling with infrastructure issues," he says. "We're not having conversations about on-premise limitations or how to create proofs of concept – we're focused on delivering value."

Instead, FWD focuses on driving value and operational efficiency.

While Sandeep acknowledges that cloud is more expensive than on-premise infrastructure in some ways, he emphasises the long-term benefits.

"By eliminating data centres and obsolete licenses, we've removed concerns about hardware and software upgrades," he explains. "We no longer worry about outdated systems requiring updates – everything is automatically maintained, which saves a tremendous amount of money over time."

Interview

AWS & FWD: Reinventing the future of digital insurance

Chad Hersh, Head of Worldwide Market Development, Life Insurance at AWS on enabling cloud-first and customer-centric transformation at FWD insurance

There are good reasons why AWS is one of the world's most successful and trusted cloud service providers. Global capabilities but local presence, a continuous culture of industry-leading innovation and collaborative development, and some of the most advanced digital solutions in the industry, to name a few.

These capabilities and more help clients in the insurance sector transform the way they operate, enabling them to modernise core systems more efficiently, harness the power of data, and deliver new and innovative experiences to customers.

"As well as providing an incredibly wide array of technology capabilities, from cloud infrastructure and a full range of data and analytics solution to AI, ML and agentic capabilities, we also build industry-specific accelerators that help insurers get more value from their cloud and AI transformations," says Chad Hersh, Head of Worldwide Market Development, Life Insurance at AWS.

"A great example of this is Insurance Lake," says Chad. "It's an insurance-specific data lake accelerator that's easy to implement, low cost to run, open source with no license costs, and built from the ground up to support insurance data."

Changing the way people view insurance

An example of how AWS enables cloud-first and customer-centric transformations is its partnership with innovative pan-Asian firm FWD Insurance. Unlike many in what is still a traditional industry, FWD is a digital-first and technology-driven company with a vision to change the way people feel about insurance.

"Technology is crucial to this," says FWD's Group Chief Technology and Operations Officer Sandeep Pandey. "We have a very clear strategy and AWS has been a key partner for our platform and architecture across the experience layer, process layer, integration layer and infrastructure."

Chad points to three fundamental pillars that distinguish AWS in the market when working with partners like FWD: a very comprehensive solution portfolio that goes far beyond cloud to power everything from customer service to risk, proven experience and a strong culture of innovation.

Supporting transformation at FWD

FWD began its cloud-first strategy in 2020. The company announced a five-year agreement with AWS in 2024, focused on

driving FWD's AI and ML programmes, improving data-driven decision making, and customer-focused innovation.

"There are three core areas where we've helped with FWD's digital transformation," Chad notes. "The first is FinOps, where we've delivered a centralised finance cloud hub that revolutionised financial data management, enabled faster closing periods, brought significant operational efficiencies and improved ROI through streamlined processes.

"On customer experience, we're powering FWD's Omne app, which enhances customer engagement through Gen AI features like digital avatars, BI dashboards and automation," he notes. "Thirdly, for digital innovation, we've supported FWD's Cloud Academy training solution, helping more than 600 employees."

AWS has also enabled operations and risk management through FWD's Shared Service Centre. "Results include 60% faster new product release, test cycles reduced from 30 days to one week, 50% increase in the frequency of IT releases and 30% cost savings," Chad reports.

AWS will continue to support FWD's transformation. "Our partnership demonstrates how our comprehensive capabilities drive meaningful transformation and help set new standards for operational excellence and customer experience, which is where FWD is focused.

"Building on what we've already developed, AI and agentic solutions will rise in prominence," says Chad, "particularly Gen AI implementation into different areas like intelligent call centres or 'generative business intelligence,' which gives a more holistic view of customers, markets, risk and more. Technology is technology. For us it's about how we bring new capabilities into the business, its processes and infrastructure, and the customer experience. It has to be meaningful."

Looking for help to accelerate your digital transformation journey?

Contact one of our specialists now

Contact us

Platform strategy drives customer-led ambition

Building on this foundation, FWD has developed a four-platform strategy that focuses on creating integrated ecosystems rather than isolated applications.

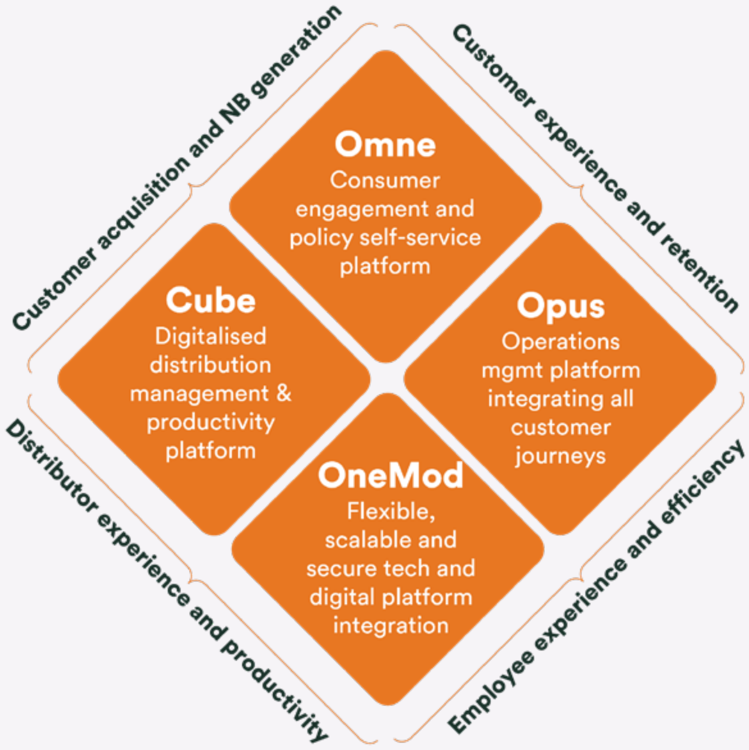
These platforms – FWD Omne for customer engagement, FWD Cube for distribution, FWD Opus for management woperations and OneMod as an overarching platform – are designed to provide consistency across markets while allowing for necessary customisation.

“We’ve moved from an application-led approach to an ecosystem-led, platform-driven model,” Sandeep says. For example, we have streamlined the end-to-end sales journey through FWD Cube, which is primarily utilised by agents. FWD Cube seeks to maximise the agent lifecycle from recruitment and onboarding to sales by offering a unified experience through tablet, web and mobile apps.

The customer platform, FWD Omne, provides a consistent experience across digital channels. “Whether customers interact with us through the web or our app, they receive the same experience,” explains Sandeep.

“We’ve launched FWD Omne in five of our 10 markets and are expanding to the rest.”

This platform approach is particularly important for FWD Opus, the operations management platform, which Sandeep describes as having a modular, “Lego block” architecture.


Customer acquisition and NB generation
Customer experience and retention
Distributor experience and productivity
Employee experience and efficiency
Omne
Consumer engagement and policy self-service platform
Cube
Digitalised distribution management & productivity platform
Opus
Operations mgmt platform integrating all customer journeys
OneMod
Flexible, scalable and secure tech and digital platform integration

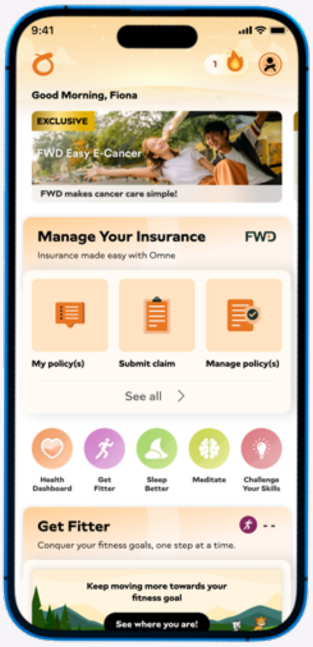
Through FWD Omne, insurance can be managed quickly and easily as illustrated opposite

The name itself has meaning – “Opus stands for Operations Platform for Us,” Sandeep clarifies.

The modular design allows for 70% reusability while maintaining flexibility. “For Japan, which is primarily focused on the IFA channel for distribution but not agency or bancassurance channels, we can configure a lighter version rather than implementing everything,” he explains.

The fourth platform, OneMod, acts as a “platform of platforms,” encapsulating all the other three platforms and dividing the entire tech stack into distinct layers.

“We’re truly modularising our tech stack group-wide, across all applications without exception,” says Sandeep. “We’re dividing everything into experience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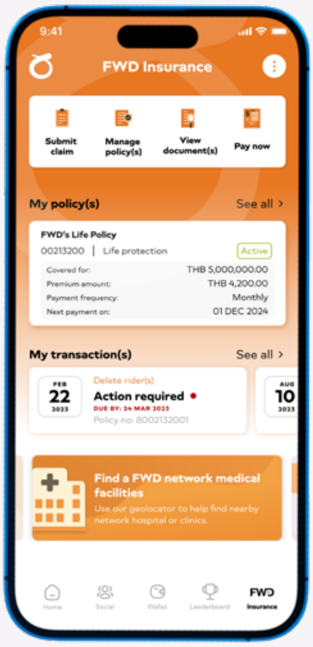
Good Morning, Fiona
EXCLUSIVE
FWD Easy E-Cancer
FWD makes cancer care simple!
Manage Your Insurance
FWD
Insurance made easy with Omne
My policy(s)
Submit claim
Manage policy(s)
See all
Health Dashboard
Get Fitter
Sleep Better
Meditate
Challenge Your Skills
Get Fitter
Conquer your fitness goals, one step at a time.
Keep moving more towards your fitness goal
See where you are!

Overview page with easy access to customer engagement functionality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FWD Insurance
Submit claim
Manage policy(s)
View document(s)
Pay now
My policy(s)
See all
FWD's Life Policy
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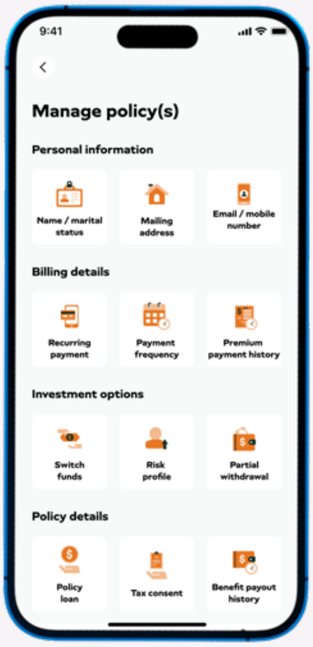
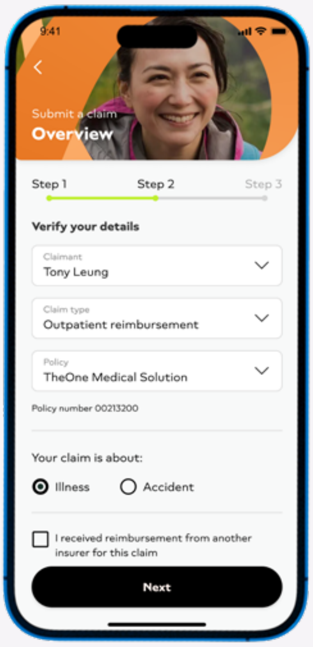
Active
Covered for: THB 5,000,000.00
Premium amount: THB 4,200.00
Payment frequency: Monthly
Next payment on: 01 DEC 2024
My transaction(s)
See all
FEB 22 2023
Delete rider(s)
Action required
DUE BY: 24 MAR 2023
Policy no: 8002132001
AUG 10 2023
Find a FWD network medical facilities
Use our geolocator to help find nearby network hospital or clinics.
Home
Social
Wallet
Leaderboard
FWD Insurance

Insurance dashboard provides a quick view of policies and latest updates

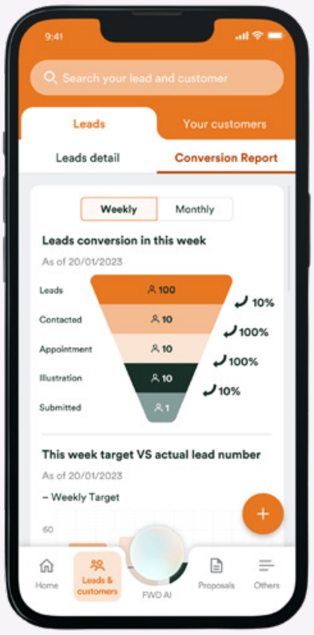

9:41
Manage policy(s)
Personal information
Name / marital status
Mailing address
Email / mobile number
Billing details
Recurring payment
Payment frequency
Premium payment history
Investment options
Switch funds
Risk profile
Partial withdrawal
Policy details
Policy loan
Tax consent
Benefit payout history

FWD Omne empowers customers to digitally manage their policies seamlessly

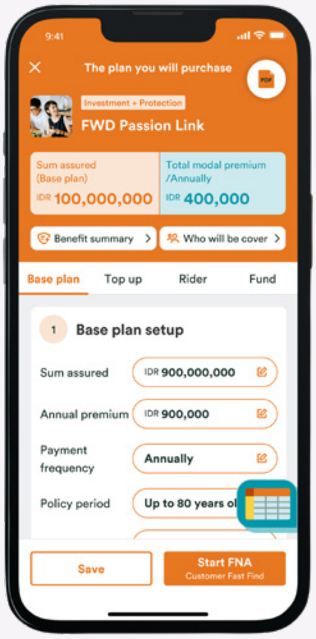

9:41
Submit a claim
Overview
Step 1
Step 2
Step 3
Verify your details
Claimant
Tony Leung
Claim type
Outpatient reimbursement
Policy
TheOne Medical Solution
Policy number 00213200
Your claim is about:
● Illness
○ Accident
☐ I received reimbursement from another insurer for this claim
Next

Submitting a claim through FWD Omne is as easy as 3 steps

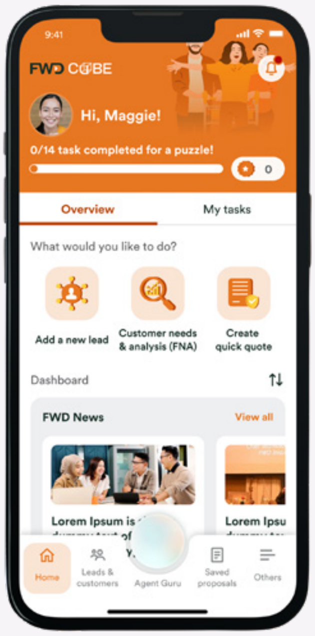
FWD CUBE


9:41
Search your lead and customer
Leads
Your customers
Leads detail
Conversion Report
Weekly
Monthly
Leads conversion in this week
As of 20/01/2023
Leads
Contacted
Appointment
Illustration
Submitted
100
10
10
10
1
10%
100%
100%
10%
This week target VS actual lead number
As of 20/01/2023
– Weekly Target
60
Home
Leads & customers
FWD AI
Proposals
Others

Shortcuts to most used functions such as quote creation and KYC


9:41
The plan you will purchase
PDF
Investment + Protection
FWD Passion Link
Sum assured (Base plan)
IDR 100,000,000
Total modal premium /Annually
IDR 400,000
Benefit summary
Who will be cover
Base plan
Top up
Rider
Fund
1 Base plan setup
Sum assured
IDR 900,000,000
Annual premium
IDR 900,000
Payment frequency
Annually
Policy period
Up to 80 years ol
Save
Start FNA
Customer Fast Find

Leads conversion funnel enables agents to proactively manage leads and customers


9:41
FWD CUBE
Hi, Maggie!
0/14 task completed for a puzzle!
0
Overview
My tasks
What would you like to do?
Add a new lead
Customer needs & analysis (FNA)
Create quick quote
Dashboard
FWD News
View all
Lorem Ipsum is
Lorem Ipsu
Home
Leads & customers
Agent Guru
Saved proposals
Others

Easy access to sale activities such as the base plan, riders, and fund allocation

SANDEEP PANDEY

GROUP CHIEF TECHNOLOGY AND OPERATIONS OFFICER

Sandeep is the Group Chief Technology and Operations Officer and the member of Group Executive Committee for FWD Group. He has more than 20 years of experience across FMCG and insurance at global level in strategising and transforming areas of information technology, digital initiatives and customer experience. He supports FWD Group's clients and business partners in all 10 markets, overseeing all aspects of customer, operations, enterprise IT, including strategy, architecture, cloud, security and applications. Prior to joining FWD Group, Sandeep served Global leadership roles at BUPA and AIA. He was awarded Amazon Digital Innovation Hero Award in 2024, HotTopics' top 100 Global CIO 2023, and IDC CIO of the year award in 2021.

layers, process layers, system integration layers, data layers and infrastructure layers – creating an enterprise architecture that no one else is doing."

Customer-centricity drives innovation

Throughout all these technological efforts, FWD maintains a relentless focus on the customer experience. This focus is encapsulated in the company's vision of "changing the way people feel about insurance."

The company is constantly listening to customer feedback and enhancing its offerings accordingly.

"It's all about creating a differentiated experience," Sandeep says. "How do we simplify processes for our customers while providing the support they need when they need it?"

This customer-centricity extends to FWD's agents as well. At a recent leadership conference in Seoul, agency leaders emphasised the importance of empathy in their work, rather than focusing solely on sales metrics.

"I expected them to talk about sales targets and upselling," Sandeep admits. "But they focused entirely on empathy and being there for customers. When your team naturally echoes your values without prompting, you know your culture is working."

AI enhances security and fraud detection

While focusing on customer experience, FWD also recognises the importance of security and fraud detection. The company has implemented AI-based systems that analyse customer data to identify potentially fraudulent transactions.

"We're a very data-driven organisation," Sandeep explains. "When data enters our backend systems, our fraud detection module immediately analyses customer history and other key indicators."

This system examines various data points, including previous claims history and beneficiary details, to assess the likelihood of fraud. The company is also developing predictive analytics capabilities to identify patterns associated with fraudulent behaviour.

"Our AI systems are constantly learning," Sandeep says. "We use predictive analytics to identify when an agent or customer shows a higher propensity for problematic behaviour. This allows us to intervene early with targeted monitoring rather than reacting after an issue occurs."

FWD

FWD also implements comprehensive security measures to protect customer data and prevent system infiltration. "When agents use personal devices, we verify they aren't introducing malware into our ecosystem," he continues. "We have multiple security layers from Zscaler to backend protection that continuously monitor and filter traffic."

Sustainability through technology

Sustainability is another key area where technology plays an important role at FWD. Sandeep sees the move to cloud services as contributing significantly to reducing the company's environmental footprint.

"Our technology partners such as Microsoft and AWS operate more sustainable data centres than any individual company could," he points out. "They're incentivised to reduce carbon emissions and are implementing innovative solutions like underwater data centres. Why try to replicate that ourselves when we can leverage their expertise?"

Beyond cloud services, FWD has implemented measures to reduce electronic waste through responsible disposal of old equipment and to minimise paper waste through digital adoption.

"The printers we do maintain require password authentication, and we monitor usage patterns. If someone prints 100 pages, they'll receive questions about why that volume was necessary."

Strategic partnership with AWS drives innovation

A key element of FWD's technological transformation has been its partnership with Amazon Web Services (AWS). When Sandeep joined FWD, different markets were using different technology partners, including AWS. Rather than standardising on a single platform, he decided to maintain relationships with various providers.

"Rather than forcing standardisation on one platform, I decided we would leverage various partners," he recalls.

"For example, we initially signed a three-year agreement with AWS, and last year we renewed for another five years, reflecting the strategic importance of this partnership."

Today, approximately 50% of FWD's workload runs on AWS, including the FWD Omne customer platform. The partnership has evolved beyond cloud computing alone to include more advanced capabilities.

> **"We're not just doing cloud, we're rationalising applications and creating Centres of Excellence from the beginning"**
>
> **SANDEEP PANDEY,**
> GROUP CHIEF TECHNOLOGY AND OPERATIONS OFFICER,
> FWD GROUP

"We're now exploring AWS services beyond basic infrastructure," Sandeep explains. "We're evaluating Amazon Bedrock for generative AI capabilities, using AWS services for code development and leveraging their analytics capabilities."

The partnership with AWS has been instrumental in FWD's transformation journey. "AWS has worked directly with our principals on cloud architecture and transformation strategies," Sandeep says. "They provide tremendous value beyond just services – they contribute meaningful expertise and mindshare to our initiatives."

Future priorities and talent development

Looking to the future, Sandeep emphasises several key priorities for FWD. Growth remains a central focus, with clear targets set for each market.

"My role is ensuring our technology and operations capabilities enable this growth while maintaining our customer focus."

Sustainable business practices are also crucial. "We need to build a sustainable business with long-term value," Sandeep says.

"Our products represent long-term commitments to customers – we need to ensure we'll be here to honour those commitments not just next year, but for the next hundred years."

The customer-led ambition continues to be at the heart of FWD's strategy. "Our customer-led approach is now central to every executive's priorities," Sandeep emphasises. "It's no longer

FWD

FWD
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FWD IN NUMBERS

10
FWD Group operates in 10 markets across Asia, with a vision of changing the way people feel about insurance, under a customer-led and tech-enabled approach

50%
of FWD's workload runs on AWS

22,000+
FWD employees have completed more than 22,000 courses and secured 1,000+ certifications through its Tech and Ops Academy as of Dec 2024

4

FWD's strategy is built on four platforms: FWD Cube (distribution), FWD Omne (customer), FWD Opus (operations), and OneMod

just a technology initiative – it's the organisation's driving force."

Talent development remains a key focus, with FWD investing heavily in training programmes through its Technology Academy, which has since evolved into the Tech and Ops Academy.

"When we started our cloud transformation, I realised we needed to build internal skills," Sandeep recalls.

The academy has made a significant impact across the organisation. "Our employees have completed more than 22,000 courses and obtained more than 1,000 professional certifications as of end of 2024," Sandeep says. "People are the foundation of everything we do – you can have the best strategy and vision, but without the right talent, it won't succeed."

Efficiency is another ongoing priority. "We're focused on doing more with the same or fewer resources," explains Sandeep. "We have specific operational efficiency targets that we're driving toward over the next few years."

As FWD continues its transformation journey, the combination of technology excellence and customer focus remains at its core.

"When you place the customer at the centre of everything you do, asking whether each decision benefits them, the business and your team – in that order – you rarely go wrong," says Sandeep.

"We're creating customer-led solutions and products that also build a sustainable business. Both aspects must work in harmony for true success."

HOW THE HACKETT GROUP GUIDES COMPANIES INTO REAL AI ADOPTION

WRITTEN BY:
KRISTIAN MCCANN

PRODUCED BY:
TOM VENTURO

The Hackett Group's Vin Kumar explains how the company uses a mix of experience, IP and insight to help enterprises meaningfully implement AI

With enterprises large and small racing to implement AI into their operations, the risk is that many may get caught up in the excitement and promise of optimisation without a clear picture of what they want out of it, nor how they are going to implement it. Indeed, a Gartner study highlights that up to 30% of all Gen AI projects will be abandoned by the end of 2025 because businesses lack clarity on ROI.

Organisations must therefore establish clear value propositions and strategic goals before embarking on AI initiatives, especially as many organisations implementing such change are not tech companies, but seek to introduce tech to their processes. The key for such organisations is to have a dedicated AI department on hand to prevent things veering off course. This is why external specialists skilled in implementing AI across multiple sectors and industries are at hand. The Hackett Group is at the forefront of those offering expert guidance in this area.

"Our role as an advisor is to simplify the complexities of AI for our clients," explains Vin Kumar, MD and AI & Digital Operations Practice Leader at The Hackett Group.

"We are constantly bombarded with information about technology, and it's our job to help clients understand how to leverage these advancements to optimise their operations."

77%

of companies are either using or exploring AI technologies

Source: San Diego National University

Vin Kumar: An experienced implementer

Vin heads up The Hackett Group's AI and Digital Operations Advisory Practice, and oversees revenue generation and AI and digital operations service delivery. His extensive career spans engineering, finance and management consulting, providing him with a unique perspective on the challenges and opportunities in digital transformation.

At JP Morgan, he focused on risk management. At Gemini (now Capgemini) he worked on mergers and acquisitions. Such experience helps him understand the challenge of advising large, complex organisations, while finding ways to achieve targeted outcomes with minimal disruption.

"I come from the old school of consulting where I want to be sitting in my client's seat and see the world from their view," Vin explains. "Then, when I come back to them, I can advise them much better."

> **"Our clients require an AI roadmap that reflects the current environment and also prepares them for future developments"**
>
> **Vin Kumar,**
> Managing Director / Principal – AI Enablement & Digital Operations Practice Leader,
> **The Hackett Group**

As a result, Vin takes a hands-on approach to his work. Describing him and his team of consultants as a 'SEAL Team Six', he says they "come in with precision, identify what has to be done and do it".

He adds: "To do that we need the latest tools, both to help our consultants deliver a great service to clients and also for the clients to get maximum benefits in the shortest possible time," Vin explains.

How Hackett ushers in AI implementation

The Hackett Group's primary goal when it comes to implementing AI is to assist clients in streamlining operations.

The first step is demystifying technologies like Gen AI for clients and helping them understand its impact on back-office functions such as finance, HR, IT, procurement, sales, marketing and supply chain.

"Showing clients what Gen AI is and how it works is very different than explaining how it's going to impact your R&D and your product side of the house," Vin explains.

This begins by building a roadmap for AI adoption, which involves several key steps. Vin and his team work closely with clients to identify their needs and challenges, which includes assessing existing processes, understanding the current technology landscape and determining the organisation's AI readiness.

"Our clients require a roadmap that reflects the current environment and prepares them for future developments," Vin explains.

The roadmap typically includes three categories of use cases:

- Breakthrough
- Transformative
- Incremental

Breakthrough use cases involve significant innovations that can change the way a business operates. Transformative use cases are when AI is integrated into existing processes to enhance performance. Incremental use cases, meanwhile, focus on replacing manual tasks with automated solutions.

To achieve this, The Hackett Group employs a proprietary platform solution called AI Explorers. This tool aids clients in recognising breakthrough, transformative and incremental opportunities across various processes.

By leveraging pre-trained models, the firm ensures that clients can build solutions without the need for extensive data investments, making AI adoption more accessible and cost-effective.

The Hackett Group is able to do this because its platform bristles with all the IP it has collected from years of benchmark best practice, metrics

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and process flows. Clients are able to draw upon this when implementing it into their workflows.

"We built a platform using this IP, and now Gen AI can help identify opportunities where they exist, be this an efficiency gain or plugging experience gaps," Vin explains. "Then it's trying to identify what sort of technology will help you resolve a particular issue. All of this capability is built into our platform."

One such example is taking a company's process flows and identifying ways to optimise. Where a company doesn't have a standard of practice, Vin and his team can identify best practice based on similar use cases, and then load this onto the platform for the client.

The key is to dynamically manage change as it evolves. To this end, the Hackett Group's strategy is to educate both its own team and its clients on the potential of digital technologies.

"As we move towards a more automated future, the structure of organisations will need to change," says Vin. "The talent required to support these new processes will also differ significantly from what is needed today."

This shift emphasises the importance of careful planning and consideration to ensure a smooth transition.

Managing risk and governance

With the adoption of AI comes the need for robust risk management and governance frameworks. Organisations must be aware of the regulatory implications of using AI, particularly in highly regulated industries such as healthcare and finance.

Equally, with the new EU AI Act coming into effect, users of Gen AI systems will have to follow protocol and ensure they act within the law.

83%

of companies are considering AI a top priority

Source: San Diego National University

"We help clients navigate these complexities by providing guidance on risk governance and compliance," Vin explains.

This includes establishing protocols for data management, ensuring compliance with industry regulations and defining roles and responsibilities within the organisation.

"How you use Gen AI, they [regulators] define, but it's different depending on whether it is on your customer side versus internal consumption," he says.

A give and take approach to partnerships

To help steer its clients through regulations, and to provide a better service generally for clients, The Hackett Group partners with IT leader Infosys.

"We work with Infosys to understand what they are doing and where they are going," Vin explains. "This is what clients value in service providers."

> **"As technology continues to evolve, we remain committed to guiding clients through the challenges and opportunities that lie ahead"**
>
> **Vin Kumar,**
> Managing Director / Principal – AI Enablement & Digital Operations Practice Leader,
> **The Hackett Group**

Utilising The Hackett Group's IP on vital areas such as best practices, Infosys uses its metrics and incorporates that into its client-facing services and solutions.

In turn, when The Hackett Group wants to build systems for a client, Infosys is available to tailor that solution to the client's needs.

An AI enabled future

In a world of shifting sands, it's important that The Hackett Group helps clients be adaptable, and to this end it crafts agile roadmaps to help clients adjust to change.

"The technology landscape is changing so rapidly that we need to adapt our strategies accordingly," says Vin.

He notes that where traditional transformation roadmaps spanned five years, today's. The firm is working with clients on roadmaps that span two-to-three years, with a focus on the adoption of Gen AI and other digital solutions.

A vital element of these short-term roadmaps is provisions for helping companies manage AI once it is implemented.

"Over the next 12 to 18 months we will be helping companies build the role of Chief AI Officer, because this can be an extremely technical challenge "

He adds: "Gen AI adoption is going to transform how companies are working, and so building this centralised role within an organisation will remain crucial, as use expands beyond initial implementation.

"As technology continues to evolve, we remain committed to guiding our clients through the challenges and opportunities that lie ahead." ○

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